INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



We Protect Hoosiers and Our Environment.

Michael R. Pence Governor

Thomas W. Easterly Commissioner

100 North Senate Avenue Indianapolis, Indiana 46204 (317) 232-8603 Toll Free (800) 451-6027 www.idem.IN.gov

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a Significant Revision to a Minor Source Operating Permit (MSOP)

for Cast Metals Technologies in Randolph County

Significant Permit Revision No. M135-32888-00024

The Indiana Department of Environmental Management (IDEM) has received an application from Cast Metals Technologies located at 1036 Old Highway 27, Winchester, Indiana 47394 for a significant revision of its MSOP issued on June 1, 2009. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow Cast Metals Technologies to make certain changes at its existing source. Cast Metals Technologies has applied to request the following: (1) the removal of a number of emission units; (2) the replacement of old baghouses with one new baghouse; (3) the addition of existing emission units that have not previously been permitted; (4) the construction and operation of new emission units.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed or removed. **These corrections, changes, and removals may include Title I changes.** IDEM has reviewed this application, and has developed preliminary findings, consisting of a draft permit and several supporting documents, that would allow the applicant to make this change.

IDEM is aware that the sandblast cabinet and one (1) cope and drag castings knockout machine have been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This draft MSOP Significant Permit Revision contains provisions to bring unpermitted equipment into compliance with construction and operation permit rules.

A copy of the permit application and IDEM's preliminary findings are available at:

Winchester Community Public Library 125 North East Street Winchester, IN 47394-1604

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will



make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number M135-32888-00024 in all correspondence.

Comments should be sent to:

Sarah Street
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 2-8427
Or dial directly: (317) 232-8427
Fax: (317)-232-6749 attn: Sarah Street
E-mail: sstreet@idem.in.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor or noise. For such issues, please contact your local officials.

For additional information about air permits and how you can participate, please see IDEM's **Guide for Citizen Participation** and **Permit Guide** on the Internet at: www.idem.in.gov.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions please contact Sarah Street of my staff at the above address.

Iryn Califung, Section Chief

Permits Branch
Office of Air Quality

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100 North Senate Avenue Indianapolis, Indiana 46204 (317) 232-8603 Toll Free (800) 451-6027 www.idem.IN.gov

Ryan Olney Cast Metals Technologies 1036 Old Highway 27 Winchester, Indiana 47394

> Re: M135-32888-00024 First Significant Revision to M135-26992-00024

Dear Mr. Olney:

Cast Metals Technologies was issued a Minor Source Operating Permit (MSOP) No. M135-26992-00024 on June 1, 2009 for a stationary aluminum foundry and die casting source which melts only clean charge, customer returns or internal scrap located at 1036 Old Highway 27, Winchester, Indiana 47394. On February 27, 2013, the Office of Air Quality (OAQ) received an application from the source requesting the following:

- The removal of a number of emission units. (1)
- (2) The replacement of old baghouses with one new baghouse.
- The addition of existing emission units that have not previously been permitted. (3)
- (4) The construction and operation of new emission units.

The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-6.1-6, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-6.1-6(i). Pursuant to the provisions of 326 IAC 2-6.1-6, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

- 1. **General Construction Conditions**
 - The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
- 2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- 3. Effective Date of the Permit Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
- Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if 4.



Cast Metals Technologies Page 2 of 2 Winchester, Indiana MSOP SPR No. M135-32888-00024

Permit Reviewer: Sarah Street

construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Sarah Street, of my staff, at 317-232-8427 or 1-800-451-6027, and ask for extension 2-8427.

Sincerely,

Iryn Calilung, Section Chief Permits Branch Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/ss

cc: File - Randolph County

Randolph County Health Department

U.S. EPA, Region V

Compliance and Enforcement Branch

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT We Protect Hoosiers and Our Environment.



Michael R. Pence Governor

Thomas W. Easterly Commissioner

DRAFT

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Minor Source Operating Permit OFFICE OF AIR QUALITY

Cast Metals Technologies 1036 Old Highway 27 Winchester, Indiana 47394

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M135-26992-00024	
Original Signed by:	Issuance Date: June 1, 2009
Iryn Calilung, Section Chief	
Permits Branch	Expiration Date: June 1, 2014
Office of Air Quality	

First Significant Permit Revision No.: M135-32888-00024		
Issued by:	Issuance Date:	
Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Expiration Date: June 1, 2014	



DRAFT

Cast Metals Technologies Significant Permit Revision No. M135-32888-00024 Winchester, Indiana Revised by: Sarah Street

Permit Reviewer: Hannah L. Desrosiers

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary aluminum foundry and die casting source which melts only clean charge, customer returns or internal scrap.

Source Address: 1036 Old Highway 27, Winchester, Indiana 47394

General Source Phone Number: 740-363-1941

SIC Code: 3363 (Aluminum Die-castings),

3365 (Aluminum Foundries)

County Location: Randolph

Source Location Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit Program

Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories, under US EPA memo

dated December 4, 1998.

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

(a) Old Building Operations

- (1) Two (2) perm mold crucible furnaces, melting only "clean charge" aluminum for the Perm Mold Casting Line, identified as Perm Mold Crucible Furnace #1 and Perm Mold Crucible Furnace #2, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- Two (2) perm mold cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Perm Mold Casting Machines #1 and #2, constructed prior to 1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (3) One (1) Wheelabrator shotblast machine, serving the Perm Mold Casting Line, identified as SB-3, constructed in 1990, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 3, and exhausting to the outside;
- (4) One (1) Spinner Hanger shotblast machine, serving the Perm Mold Casting Line, identified as SB-4, constructed in 1998, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 1, and exhausting to the outside:

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- (5) Four (4) cope and drag crucible furnaces, melting only "clean charge" aluminum for the Cope and Drag Casting Line, identified as Crucibles #1 #4, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (6) One (1) cope and drag pouring and cooling line where aluminum is poured into sand molds (pouring/casting/cooling), identified as Cope and Drag Casting, constructed in 2007, with a maximum throughput capacity of two hundred forty (240) pounds (twelve hundredths (0.12) tons) of aluminum and one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, respectively, uncontrolled and exhausting to the inside of the building;
- (7) One (1) cope and drag sand system, identified as Cope and Drag Muller Sand System, constructed prior to 1970, with a maximum capacity of one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, uncontrolled and exhausting to the inside of the building;
- (8) Two (2) cope and drag castings knockout machines, identified as Knockout-5 and Knockout-6, constructed in 1982, with a maximum throughput capacity of seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, each, uncontrolled and exhausting to the inside of the building;
- (9) Nine (9) shell core machines, with a combined maximum heat input capacity of two and twenty-five hundredths (2.25) MMBtu/hr, and a combined maximum throughput capacity of two hundred fifty-five (255) pounds (one thousand two hundred seventy-five ten-thousandths (0.1275) tons) of cores per hour and seven hundred sixty-five (765) pounds (three thousand eight hundred twenty-five ten-thousandths (0.3825) tons) of sand per hour, uncontrolled and exhausting to the inside of the building, and consisting of the following;
 - (A) Six (6) shell core machines, identified as Core Machines #1-6, each constructed in 1996;
 - (B) One (1) shell core machine, identified as Core Machine #7, constructed in 2000; and
 - (C) Two (2) shell core machines, identified as Core Machines #8 and #9, each constructed in 2002, each;
- (10) One (1) clean sand storage silo, serving the shell core operations, identified as Sand Storage Silo, constructed prior to 1970, with a maximum capacity of one hundred twenty thousand (120,000) pounds (twenty (20) tons);
- (11) One (1) sandblast cabinet, identified as SAB-01, constructed in 1996, with a maximum capacity of two hundred eighty (280) pounds (0.14 tons) of sand per hour, controlled by a fabric filter, and exhausting to the inside of the building;

(b) New Building Operations

(1) One (1) Hunter reverberatory furnace, melting only "clean charge" aluminum for the Hunter Casting Line, identified as Reverberatory Furnace #2, constructed in 1999, having a maximum heat input capacity of seven and five tenths (7.5) MMBtu/hr, and a maximum throughput capacity of three thousand (3000) pounds (one and five tenths (1.5) tons) of aluminum per hour, uncontrolled and



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exhausting to stack #11;

- One (1) Hunter automatic molder machine where aluminum is poured into sand molds (pouring/casting/cooling), identified as Molder #6, constructed in 1999, with a maximum capacity of three thousand (3000) pounds (one and five tenths (1.5) tons) of aluminum and nine (9) tons of sand per hour, respectively, uncontrolled and exhausting to the inside of the building;
- (3) One (1) Hunter sand system, identified as Hunter Sand System #2, constructed in 1999, with a maximum capacity of nine (9) tons of sand per hour, controlled by a baghouse dust collector, identified as Baghouse #6, and exhausting to stack #14;
- (4) One (1) Hunter reclaimed sand storage silo, serving the Hunter Sand System #2, constructed in 1998 with a maximum capacity of 200 tons;
- (5) Three (3) Hunter castings knockout machines, uncontrolled and exhausting to the inside of the building, and consisting of the following:
 - (A) One (1) Hunter castings knockout machine, identified as Knockout-2, constructed in 1999, with a maximum throughput capacity of one thousand seven hundred eighty (1780) pounds (eighty-nine hundredths (0.89) tons) of aluminum castings per hour; and
 - (B) Two (2) Hunter castings knockout machines, identified as Knockout-3 and Knockout-4, constructed in 2000, with a maximum throughput capacity of seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, each;
- (6) Finishing operations, with a combined maximum capacity of one thousand four hundred forty (1,440) pounds of metal castings per hour, uncontrolled and exhausting to the inside of the building, as follows: [326 IAC 6-3-2]
 - (A) Three (3) cut-off saws, constructed in 1990;
 - (B) Nine (9) sanders, constructed in 1998.
- (7) One (1) Wheelabrator shotblast machine, identified as SB-5, constructed in 1999, with a maximum throughput capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse #6, and exhausting to stack #14.
- (c) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6 including:
 - (1) One (1) cold cleaner parts washer, constructed in 2000, using no halogenated solvents; [326 IAC 8-3-2] [326 IAC 8-3-5]
- (d) Mold release agents using low volatile products (vapor pressure less than or equal to two (2) kiloPascals measured at thirty-eight (38) degrees Celsius (C);
- (e) Chlorine fluxing operations, to reduce the formation of oxides during each melt process, and prevent the buildup of oxides in each furnace, with a maximum usage rate of five and sixty-two hundredths (5.62) pounds (three thousandths (0.003) tons) of flux per hour, combined;

Cast Metals Technologies Winchester, Indiana

Significant Permit Revision No. M135-32888-00024 Revised by: Sarah Street

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- (f) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, including the following:
 - (1) Two (2) heat treat furnaces, each constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, each, uncontrolled and exhausting to stacks #9 and #10;
 - One (1) age oven, constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, uncontrolled and exhausting to the inside of the building;
 - Two (2) heat treat furnaces, constructed in 2013, with a maximum heat input capacity of sixty-three hundredths (0.63) million British thermal units per hour, each, uncontrolled and exhausting to stacks #12 and #13, respectively.
- (g) Combustion source flame safety purging on startup;
- (h) Quenching operations used with heat treating processes;
- (i) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment, including but not limited to the following:
 - (1) Maintenance welding activities;

Total weld rod and wire usage is less than six hundred twenty-five (625) pounds per day, and less than three thousand four hundred (3,400) inches of metal is cut per hour;

- (j) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (k) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (I) On-site fire and emergency response training approved by the department; and
- (m) Paved roads and parking lots with public access [326 IAC 6-4].



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SECTION B

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- This permit, M135-26992-00024, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

Enforceability B.4

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

Severability B.5

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

- The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.



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B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management Compliance and Enforcement Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
 - Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.



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B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

All terms and conditions of permits established prior to M135-26992-00024 and issued pursuant to permitting programs approved into the state implementation plan have been either:

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- (1) incorporated as originally stated,
- (2)revised, or
- (3)deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

The application for renewal shall be submitted using the application form or forms (a) prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management Permit Administration and Support Section, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- If the Permittee submits a timely and complete application for renewal of this permit, the (c) source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 (a) whenever the Permittee seeks to amend or modify this permit.



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(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.15 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:



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The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.18 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.



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SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- Violation of any conditions of this permit. (a)
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- Changes in regulatory requirements that mandate either a temporary or permanent (c) reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3. 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date:
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.



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(e) Procedures for Asbestos Emission Control The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) **Demolition and Renovation** The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Licensed Asbestos Inspector The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.9 Performance Testing [326 IAC 3-6]

For performance testing required by this permit, a test protocol, except as provided (a) elsewhere in this permit, shall be submitted to:

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no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.



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Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.



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The Permittee shall record the reasonable response steps taken. (e)

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- When the results of a stack test performed in conformance with Section C Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- A record of all malfunctions, including startups or shutdowns of any facility or emission (a) control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

- Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of



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permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management Compliance and Enforcement Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

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SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Aluminum foundry and die casting operations

- Old Building Operations (a)
 - Two (2) perm mold crucible furnaces, melting only "clean charge" aluminum for the (1) Perm Mold Casting Line, identified as Perm Mold Crucible Furnace #1 and Perm Mold Crucible Furnace #2, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
 - (2) Two (2) perm mold cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Perm Mold Casting Machines #1 and #2, constructed prior to 1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
 - (3)One (1) Wheelabrator shotblast machine, serving the Perm Mold Casting Line, identified as SB-3, constructed in 1990, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 3, and exhausting to the outside;
 - (4) One (1) Spinner Hanger shotblast machine, serving the Perm Mold Casting Line, identified as SB-4, constructed in 1998, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 1, and exhausting to the outside:
 - Four (4) cope and drag crucible furnaces, melting only "clean charge" aluminum for (5)the Cope and Drag Casting Line, identified as Crucibles #1 - #4, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
 - (6)One (1) cope and drag pouring and cooling line where aluminum is poured into sand molds (pouring/casting/cooling), identified as Cope and Drag Casting, constructed in 2007, with a maximum throughput capacity of two hundred forty (240) pounds (twelve hundredths (0.12) tons) of aluminum and one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, respectively, uncontrolled and exhausting to the inside of the building;
 - One (1) cope and drag sand system, identified as Cope and Drag Muller Sand (7) System, constructed prior to 1970, with a maximum capacity of one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, uncontrolled and exhausting to the inside of the building:
 - (8) Two (2) cope and drag castings knockout machines, identified as Knockout-5 and Knockout-6, constructed in 1982, with a maximum throughput capacity of seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, each, uncontrolled and exhausting to the inside of the building;



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(9) Nine (9) shell core machines, with a combined maximum heat input capacity of two and twenty-five hundredths (2.25) MMBtu/hr, and a combined maximum throughput capacity of two hundred fifty-five (255) pounds (one thousand two hundred seventy-five ten-thousandths (0.1275) tons) of cores per hour and seven hundred sixty-five (765) pounds (three thousand eight hundred twenty-five ten-thousandths (0.3825) tons) of sand per hour, uncontrolled and exhausting to the inside of the building, and consisting of the following;

- (A) Six (6) shell core machines, identified as Core Machines #1-6, each constructed in 1996:
- (B) One (1) shell core machine, identified as Core Machine #7, constructed in 2000; and
- (C) Two (2) shell core machines, identified as Core Machines #8 and #9, each constructed in 2002, each;
- (10) One (1) clean sand storage silo, serving the shell core operations, identified as Sand Storage Silo, constructed prior to 1970, with a maximum capacity of one hundred twenty thousand (120,000) pounds (twenty (20) tons);
- (11) One (1) sandblast cabinet, identified as SAB-01, constructed in 1996, with a a maximum capacity of two hundred eighty (280) pounds (0.14 tons) of sand per hour, controlled by a fabric filter, and exhausting to the inside of the building;

(b) New Building Operations

- (1) One (1) Hunter reverberatory furnace, melting only "clean charge" aluminum for the Hunter Casting Line, identified as Reverberatory Furnace #2, constructed in 1999, having a maximum heat input capacity of seven and five tenths (7.5) MMBtu/hr, and a maximum throughput capacity of three thousand (3000) pounds (one and five tenths (1.5) tons) of aluminum per hour, uncontrolled and exhausting to stack #11;
- (2) One (1) Hunter automatic molder machine where aluminum is poured into sand molds (pouring/casting/cooling), identified as Molder #6, constructed in 1999, with a maximum capacity of three thousand (3000) pounds (one and five tenths (1.5) tons) of aluminum and nine (9) tons of sand per hour, respectively, uncontrolled and exhausting to the inside of the building;
- One (1) Hunter sand system, identified as Hunter Sand System #2, constructed in 1999, with a maximum capacity of nine (9) tons of sand per hour, controlled by a baghouse dust collector, identified as Baghouse #6, and exhausting to stack #14;
- (4) One (1) Hunter reclaimed sand storage silo, serving the Hunter Sand System #2, constructed in 1998 with a maximum capacity of 200 tons;
- (5) Three (3) Hunter castings knockout machines, uncontrolled and exhausting to the inside of the building, and consisting of the following:
 - (A) One (1) Hunter castings knockout machine, identified as Knockout-2, constructed in 1999, with a maximum throughput capacity of one thousand seven hundred eighty (1780) pounds (eighty-nine hundredths (0.89) tons) of aluminum castings per hour; and
 - (B) Two (2) Hunter castings knockout machines, identified as Knockout-3 and Knockout-4, constructed in 2000, with a maximum throughput capacity of

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seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, each;

- (6) Finishing operations, with a combined maximum capacity of one thousand four hundred forty (1,440) pounds of metal castings per hour, uncontrolled and exhausting to the inside of the building, as follows: [326 IAC 6-3-2]
 - (A) Three (3) cut-off saws, constructed in 1990;
 - (B) Nine (9) sanders, constructed in 1998.
- (7) One (1) Wheelabrator shotblast machine, identified as SB-5, constructed in 1999, with a maximum throughput capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse #6, and exhausting to stack #14.
- (c) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6 including:
 - (1) One (1) cold cleaner parts washer, constructed in 2000, using no halogenated solvents; [326 IAC 8-3-2] [326 IAC 8-3-5]
- (d) Mold release agents using low volatile products (vapor pressure less than or equal to two (2) kiloPascals measured at thirty-eight (38) degrees Celsius (C);
- (e) Chlorine fluxing operations, to reduce the formation of oxides during each melt process, and prevent the buildup of oxides in each furnace, with a maximum usage rate of five and sixty-two hundredths (5.62) pounds (three thousandths (0.003) tons) of flux per hour, combined;
- (f) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, including the following:
 - (1) Two (2) heat treat furnaces, each constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, each, uncontrolled and exhausting to stacks #9 and #10;
 - One (1) age oven, constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, uncontrolled and exhausting to the inside of the building;
 - (3) Two (2) heat treat furnaces, constructed in 2013, with a maximum heat input capacity of sixty-three hundredths (0.63) million British thermal units per hour, each, uncontrolled and exhausting to stacks #12 and #13, respectively.
- (g) Combustion source flame safety purging on startup;
- (h) Quenching operations used with heat treating processes;
- (i) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment, including but not limited to the following:
 - (1) Maintenance welding activities;

Total weld rod and wire usage is less than six hundred twenty-five (625) pounds per day, and less than three thousand four hundred (3,400) inches of metal is cut per hour;



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- (j) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (k) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- On-site fire and emergency response training approved by the department; and
- (m) Paved roads and parking lots with public access [326 IAC 6-4].

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the facilities listed in this condition shall not exceed the pound per hour limitations listed in the table below:

Emission Unit	Process Weight Rate		Particulate Emission Limit	
	(lbs/hr)	(tons/hr)	(lb/hour)	
Die cast Crucible Melt, combined (Furnace #1, #2 & #5 Die Cast)	1,860	0.93	3.91	
Perm Mold Crucible Melt, combined (Perm Mold Casting Machines #1 and #2)	600	0.30	1.83	
Crucible Melt (Crucibles #1-#4, combined)	240	0.12	0.99	
Reverb Furnace Melt (Reverberatory Furnace #2)	3,000	1.50	5.38	
Knockout, combined (Knockout-2, Knockout-3, Knockout-4, Knockout-5, and Knockout-6)	3,240	1.62	5.66	
Cope & Drag Muller Sand System	1,440	0.72	3.29	
Hunter Sand System #2	18,000	9.00	17.87	
Shotblast, each (SB-3, SB-4 & SB-5)	542	0.271	1.71	
Cutoff Saws & Sanding	1,440	0.72	3.29	
Sandblast cabinet (SAB-01)	280 0.14 1.10		1.10	

These limitations were calculated as follows:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$
 where $E =$ rate of emission in pounds per hour and $P =$ process weight rate in tons per hour

D.1.2 Secondary Aluminum Production [40 CFR 63.1500]

The Permittee shall melt only clean charge, customer returns, or internal scrap in the one (1) reverberatory furnace (#2), three (3) Die Cast Crucible furnaces (#1, #2, & #5), the two (2) Perm Mold Crucible furnaces (#1 & #2), and the four (4) Cope and Drag Crucible furnaces (#1, #2, #3, & #4).

Compliance with the above Condition renders the provisions of 40 CFR 63.1505, and 326 IAC 2-2-1(gg), not applicable to the source.



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Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for the one (1) sand system (Hunter Sand System #2), the one (1) sandblast cabinet (SAB-01), and the three (3) shotblast machines (SB-3, SB-4 and SB-5), and each of their respective pollution control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.4 Particulate Control

- In order to comply with Condition D.1.1, the baghouse (Baghouse 4) for the Hunter Sand (a) System #2 shall be in operation and control emissions at all times when the sand handling is in operation.
- (b) In order to comply with Condition D.1.1, the baghouse (Baghouse 5) for the shotblaster, identified as SB-5, shall be in operation and control emissions at all times when the shotblaster is in operation.
- In order to comply with Condition D.1.1, the baghouse (Baghouse 3) for the shotblaster, (c) identified as SB-3, shall be in operation and control emissions at all times when the shotblaster is in operation.
- (d) In order to comply with Condition D.1.1, the baghouse (Baghouse 1) for the shotblaster. identified as SB-4, shall be in operation and control emissions at all times when the shotblaster is in operation.
- (e) In order to comply with Condition D.1.1, the fabric filter for the sandblast cabinet, identified as SAB-01, shall be in operation and control emissions at all times when the sandblast cabinet is in operation.
- (f) In the event that a bag or filter failure is observed in a multi-compartment unit, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

Visible Emissions Notations D.1.5

- Visible emission notations of each the two (2) shotblast machines SB-3 and SB-4 (a) exhausts and the exhaust for shotblast machine SB-5 and the Hunter Sand System #2 (stack #14) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.



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- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.6 Parametric Monitoring

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the one (1) sand system (Hunter Sand System #2) and shotblast machine SB-5 at least once per day when the process exhausting to the control device is in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the baghouses used in conjunction with the two (2) shotblast machines (SB-3 and SB-4), at least once per day when the process exhausting to the control device is in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (c) The instrument used for determining the pressure shall comply with Section C Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.1.7 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C Response to Excursions or Exceedances).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances).

Bag or filter failure can be indicated by a significant drop in the pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.



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Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.8 Record Keeping Requirements

To document the compliance status with Condition D.1.2, the Permittee shall maintain records of the type of aluminum melted in the furnaces sufficient to show compliance with Condition D.1.3.

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- (b) To document the compliance status with Condition D.1.5, the Permittee shall maintain a daily record of visible emission notations of the two (2) shotblast machines SB-3 and SB-4 exhausts and the exhaust for shotblast machine SB-5 and the Hunter Sand System #2 (stack #14) when venting to the atmosphere. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day).
- (c) To document the compliance status with Condition D.1.6(a), the Permittee shall maintain records once per day of the pressure drop across the baghouse used in conjunction with the one (1) sand system and shotblast machine SB-5 during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading, (e.g., the process did not operate that day).
- (d) To document the compliance status with Condition D.1.6(b), the Permittee shall maintain records once per day of the pressure drop across the baghouses used in conjunction with the two (2) shotblast machines SB-3 and SB4 during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading, (e.g., the process did not operate that day).
- (e) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.



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SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Degreasing

- (c) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6 including:
 - (1) One (1) cold cleaner parts washer, constructed in 2000, using no halogenated solvents; [326 IAC 8-3-2] [326 IAC 8-3-5]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)),



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then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (1200F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Cast Metals Technologies
Winchester, Indiana
Permit Reviewer: Hannah L. Desrosiers

Company Name:

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY COMPLIANCE AND ENFORCEMENT BRANCH

MINOR SOURCE OPERATING PERMIT ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Cast Metals Technologies

Address:	1036 Old Highway 27	
City:	Winchester, Indiana 47394	
Phone #:	740-363-1941	
MSOP #:	M135-26992-00024	
	t Cast Metals Technologies is : t Cast Metals Technologies is :	 still in operation. no longer in operation. in compliance with the requirements of MSOP M135-26992-00024. not in compliance with the requirements of MSOP M135-26992-00024.
Authorized Indiv	ridual (typed):	
Title:		
Signature:		
Date:		
description of how achieved.	the source did or will achieve compl	e source is not in compliance, provide a narrative iance and the date compliance was, or will be
Noncompliance		
<u>. </u>		



Cast Metals Technologies Significan Winchester, Indiana Permit Reviewer: Hannah L. Desrosiers

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MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER: (317) 233-6865

This form should only be and to qu	used to report malfund alify for the exemption			<u> </u>	
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THIS MALFUNCTION RESULTED IN A VIOLATI PERMIT LIMIT OF	ION OF: 326 IAC	OR, PERMIT CON	DITION #	AND/	OR
THIS INCIDENT MEETS THE DEFINITION OF "I	MALFUNCTION" AS LIS	TED ON REVERSE	SIDE ? Y	N	
THIS MALFUNCTION IS OR WILL BE LONGER	THAN THE ONE (1) HO	UR REPORTING RE	QUIREMENT ?	Υ	N
COMPANY:		PHONE NO	. ()		
LOCATION: (CITY AND COUNTY)_ PERMIT NO AFS PLANT ID:	ΔΕ	S POINT ID:	INISI) .	
CONTROL/PROCESS DEVICE WHICH MALFUNG	CTIONED AND REASON	l:			
DATE/TIME MALFUNCTION STARTED:/_ ESTIMATED HOURS OF OPERATION WITH MAL	/ 20			AM	I / PM
ESTIMATED FIGURE OF OF ENAMED WITH MALE	I ONCTION CONDITION	V			
DATE/TIME CONTROL EQUIPMENT BACK-IN S	SERVICE/	/ 20	AM/PM		
TYPE OF POLLUTANTS EMITTED: TSP, PM-10), SO2, VOC, OTHER:				
ESTIMATED AMOUNT OF POLLUTANT EMITTED	DURING MALFUNCTION	ON:			
MEASURES TAKEN TO MINIMIZE EMISSIONS:_					
REASONS WHY FACILITY CANNOT BE SHUTDO	OWN DURING REPAIRS	:			
CONTINUED OPERATION REQUIRED TO PROVING CONTINUED OPERATION NECESSARY TO PRECONTINUED OPERATION NECESSARY TO PREINTERIM CONTROL MEASURES: (IF APPLICABLE)	EVENT INJURY TO PER: EVENT SEVERE DAMAG	SONS: GE TO EQUIPMENT:			
MALFUNCTION REPORTED BY:(SIGNATURE IF FAXED)		_TITLE:			
MALFUNCTION RECORDED BY:*SEE PAGE 2	DATE:	TIM	E:		



Cast Metals Technologies
Winchester, Indiana
Permit Reviewer: Hannah L. Desrosiers

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Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

*<u>Essential services</u> are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:	

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Minor Source Operating Permit (MSOP)

Source Description and Location

Source Name: Cast Metals Technologies

Source Location: 1036 Old Highway 27, Winchester, Indiana 47394

County: Randolph

SIC Code: 3363 (Aluminum Die-castings), 3365 (Aluminum

Foundries)

Operation Permit No.: M135-26992-00024

Operation Permit Issuance Date: June 1, 2009

Significant Permit Revision No.: M135-32888-00024

Permit Reviewer: Sarah Street

On February 27, 2013 the Office of Air Quality (OAQ) received an application from Cast Metals Technologies related to a modification to an existing stationary aluminum foundry and die casting source which melts only clean charge, customer returns or internal scrap.

Existing Approvals

The source was issued MSOP No. M135-26992-00024 on June 1, 2009.

County Attainment Status

The source is located in Randolph County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone
	standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable	or attainment effective October 18, 2000, for the 1-hour ozone standard

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Randolph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$

Randolph County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution

Cast Metals Technologies Winchester, Indiana Permit Reviewer: Sarah Street Page 2 of 43 TSD for MSOP SPR No. 135-32888-00024

control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants

Randolph County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

- (a) The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) Based on an U.S. EPA memo on December 4, 1998, aluminum die casting facilities typically need not be considered as a secondary metal production plant because they do not use the feedstock, do not engage in the elaborate processes, and do not produce the end products that are characteristic of facilities engaged in secondary aluminum recovery. As a result, this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and since there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

This PTE table is from the TSD of M135-26992-00024, issued on June 1, 2009

Process/	Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)												
Emission Unit	РМ	PM10	PM2.5	SO ₂	NOx	voc	со	Total HAPs	Worst Single HAP				
Die Cast Crucible Melt	6.11	6.11	6.11	0	0	0	0	0.01 HCL	0.01 HCL				
Perm Mold Crucible Melt	1.97	1.97	1.97	0	0	0	0	0.003 HCL	0.003 HCL				
Crucible Melt	0.79	0.79	0.79	0	0	0	0	0.001 HCL	0.001 HCL				
Reverb Furnace Melt	9.86	9.86	9.86	0	0	0	0	0.02 HCL	0.02 HCL				
Die Casting	0.06	0.06	0.06	0.08	0.04	0.57	0	0	0				
Perm Mold Casting	0.02	0.02	0.02	0.03	0.01	0.18	0	0	0				
Cope & Drag Pouring & Cooling	0.01	0.01	0.01	0.01	0.01	0.07	3.15	0	0				
Hunter Pouring & Cooling & Liftout	0.01	0.01	0.01	0.13	0.07	0.92	39.42	0	0				
Knockout	2.84	2.84	2.84	0	0	7.88	0	0	0				
Cope & Drag Muller Sand System	11.35	1.70	1.70	0	0	0	0	0	0				
Hunter Sand System	62.28	21.29	21.29	0	0	0	0	0	0				
Shell Core	0	0	0	0.71	0	0.30	0.07	10.77	4.51 Total Hydrocarbons				
Shotblast **	22.46	6.05	6.05	0	0	0	0	0	0				
Cut-off Saws & Sanding	4.20	0.42	0.42	0	0	0	0	0	0				
Reverb Furnace Combustion	0.06	0.25	0.19	0.02	3.29	0.18	2.76	0.06	0.059 Hexane				
Shell Core Natural Gas Combustion	0.02	0.07	0.06	0.01	0.99	0.054	0.83	0.02	0.018 Hexane				
Insignificant Natural Gas Combustion Units	0.15	0.59	0.45	0.05	7.82	0.43	6.57	0.15	0.14 Hexane				
Insignificant Solvent Usage	0	0	0	0	0	7.47	0	0	0.12 Toluene				
Maintenance Welding	0.003	0.003	0.003	0	0	0	0	2.67E-4	2.62E-4 Manganese				
Fugitive Emissions Paved Roads	0.26	0.05	0	0	0	0	0	0	0				
Total PTE of Entire Source	160.52	52.09	51.86	1.03	12.21	18.07	52.80	11.15	4.51 Total Hydrocarbons				
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10				
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA				

negl. = negligible

^{*} Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

^{**} The PTE PM specified are based on the allowable PM emissions rate under 326 IAC 6-3-2 (Process Weight Rate Rule). See State Rule applicability for details.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Cast Metals Technologies on February 27, 2013, relating to the following:

- (1) The removal of a number of emission units.
- (2) The replacement of old baghouses with one new baghouse.
- (2) The addition of existing emission units that have not previously been permitted.
- (3) The construction and operation of new emission units.

The following is a list of the new emission units:

(a) Two (2) heat treat furnaces, identified as HT-01 and HT-02, approved for construction 2013, with a maximum heat input capacity of sixty-three hundredths (0.63) million British thermal units per hour, each, uncontrolled and exhausting to stacks #12 and #13, respectively.

The following is a list of the modified pollution control device(s). Deleted language appears as strikethrough text and new language appears as **bold** text:

- (b) One (1) Hunter sand system, identified as Hunter Sand System #2, constructed in 1999, with a maximum capacity of nine (9) tons of sand per hour, controlled by a baghouse dust collector, identified as Baghouse 4 Baghouse #6, and exhausting to stack #14 the inside of the building;
- (c) One (1) Wheelabrator shotblast machine, identified as SB-5, constructed in 1999, with a maximum throughput capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 5 Baghouse #6, and exhausting to stack #14. the inside of the building.

The following is a list of the unpermitted emission units:

- (d) One (1) sandblast cabinet, identified as SAB-01, constructed in 1996, with a maximum capacity of two hundred eighty (280) pounds (0.14 tons) of sand per hour, controlled by a fabric filter, and exhausting to the inside of the building;
- (e) One (1) cope and drag castings knockout machine, identified as Knockout-6, constructed in 1982, with a maximum throughput capacity of seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, uncontrolled and exhausting to the inside of the building;

The following is a list of the emission units being removed with this revision:

- (f) Two (2) die cast crucible furnaces, melting only "clean charge" aluminum for the Die Casting Line, identified as Furnace #1 Die Cast and Furnace #2 Die Cast, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to stacks #2 and #4, respectively;
- (g) Two (2) die cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Die Cast Machines #1 and #2, constructed prior to

1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;

- (h) One (1) die cast crucible furnace, melting only "clean charge" aluminum for the Die Casting Line, identified as Furnace #5 Die Cast, constructed in 1996, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of sixty (60) pounds (three hundredths (0.03) tons) of aluminum per hour, uncontrolled and exhausting to stack #6;
- (i) One (1) die cast machine where aluminum castings are formed using a metal mold (pouring/casting/cooling), identified as Die Cast Machine #5, constructed in 1996, with a maximum throughput capacity of sixty (60) pounds (three hundredths (0.03) tons) of aluminum per hour, uncontrolled and exhausting to the inside of the building;

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination - MSOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

		PTE of Proposed Revision (tons/year)											
Process/ Emission Unit	PM	PM10	PM2.5	SO ₂	NOx	VOC	СО	GHGs as CO₂e	Total HAPs	Worst Single HAP			
Knockout-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Sandblast Cabinet (SAB-01)	50.28	35.20	35.20	0.00	0.00	0.00	0.00	0.00	0.00				
Heat treat furnaces (HT-01 and HT-02)	0.01	0.04	0.04	0.00	0.54	0.03	0.45	653.22	0.01	0.01 Hexane			
Total PTE of Proposed Revision	50.29	35.24	35.24	0.00	0.54	0.03	0.45	653.22	0.01	0.01 Hexane			

Pursuant to 326 IAC 2-6.1-6(i)(1)(E), this MSOP is revised through Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit Revision and the proposed revision involves the construction of new emission units with a potential to emit greater than or equal to twenty-five (25) tons per year of PM, PM10, and PM2.5.

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as **strikethrough** values.

	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
Process/ Emission Unit	PM	PM10*	PM2.5	SO ₂	NOx	VOC	CO	GHGs as CO₂e***	Total HAPs	Worst Single HAP
Die Cast Crucible Melt	6.11	6.11	6.11	0	0	0	0	_	0.01 HCL	0.01 HCL
Perm Mold Crucible Melt	1.97	1.97	1.97	0	0	0	0	0	0.003 HCL	0.003 HCL
Crucible Melt	0.79	0.79	0.79	0	0	0	0	0	0.001 HCL	0.001 HCL
Reverb Furnace Melt	9.86	9.86	9.86	0	0	0	0	0	0.02 HCL	0.02 HCL
Die Casting	0.06	0.06	0.06	0.08	0.04	0.57	0		0	0
Perm Mold Casting	0.02	0.02	0.02	0.03	0.01	0.18	0	0	0	0
Cope & Drag Pouring & Cooling	0.01	0.01	0.01	0.01	0.01	0.07	3.15	5.26	0	0
Hunter Pouring & Cooling & Liftout	0.01	0.01	0.01	0.13	0.07	0.92	39.42	65.70	0	0
Knockout	2.84	2.84	2.84	0	0	7.88	0	0	0	0
Cope & Drag Muller Sand System	11.35	1.70	1.70	0	0	0	0	0	0	0
Hunter Sand System	62.28	21.29	21.29	0	0	0	0	0	0	0
Shell Core	0	0	0	0.71 0	0	0.30	0.07	0	10.77 11.48	4.51 Total Hydrocarbons
Shotblast **	22.46 60.54	6.05	6.05	0	0	0	0	0	0	0
Sand Blast Cabinet (SAB-01)	50.28	35.20	35.20	0	0	0	0	0	0	0
Cut-off Saws & Sanding	4.20	0.42	0.42	0	0	0	0	0	0	0
Reverb Furnace Combustion	0.06	0.25 0.24	0.19 0.24	0.02	3.29 3.22	0.18	2.76 2.71	3,888.23	0.06	0.059 0.06 Hexane
Shell Core Natural Gas Combustion	0.02	0.07	0.06	0.01	0.99 0.97	0.054 0.05	0.83 0.81	1,166.47	0.02	0.018 0.02 Hexane
Insignificant Miscellaneous Natural Gas Combustion Units	0.15 0.11	0.59 0.44	0.45 0.44	0.05 0.00	7.82 5.73	0.43 0.32	6.57 4.82	6,921.04	0.15 0.11	0.14 0.10 Hexane
Natural Gas Combustion (New Heat Treat)	0.01	0.04	0.04	0.00	0.54	0.03	0.45	653.22	0.01	0.01 Hexane
Insignificant Solvent Usage	0	0	0	0	0	7.47	0	0	θ 0.12	0.12 Toluene
Maintenance Welding	0.003	0.003	0.003	0	0	0	0	0	2.67E-4	2.62E-4 Manganese
Fugitive Emissions Paved Roads	0.26 0.76	0.05 0.15	0.04	0	0	0	0	0	0	0
Total PTE of Entire Source	160.52 205.11	52.09 81.10	51.86 80.98	1.03 0.23	12.21 10.54	18.07 17.41	52.80 51.43	12,699.91	11.15 11.82	4.51 Total Hydrocarbons
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

^{*}Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant"

⁽PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

***The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

^{**} The PTE PM specified are based on the allowable PM emissions rate under 326 IAC 6-3-2 (Process Weight Rate Rule). See State Rule applicability for details.

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)											
Process/ Emission Unit	PM	PM10*	PM2.5	SO ₂	NOx	VOC	СО	GHGs as CO₂e**	Total HAPs	Worst Single HAP		
Perm Mold Crucible Melt	1.97	1.97	1.97	0	0	0	0	0	0.003 HCL	0.003 HCL		
Crucible Melt	0.79	0.79	0.79	0	0	0	0	0	0.001 HCL	0.001 HCL		
Reverb Furnace Melt	9.86	9.86	9.86	0	0	0	0	0	0.02 HCL	0.02 HCL		
Perm Mold Casting	0.02	0.02	0.02	0.03	0.01	0.18	0	0	0	0		
Cope & Drag Pouring & Cooling	0.01	0.01	0.01	0.01	0.01	0.07	3.15	5.26	0	0		
Hunter Pouring & Cooling & Liftout	0.01	0.01	0.01	0.13	0.07	0.92	39.42	65.70	0	0		
Knockout	2.84	2.84	2.84	0	0	7.88	0	0	0	0		
Cope & Drag Muller Sand System	11.35	1.70	1.70	0	0	0	0	0	0	0		
Hunter Sand System	62.28	21.29	21.29	0	0	0	0	0	0	0		
Shell Core	0	0	0	0	0	0.30	0.07	0	11.48	4.51 Total Hydrocarbons		
Shotblast	60.54	6.05	6.05	0	0	0	0	0	0	0		
Sand Blast Cabinet (SAB-01)	50.28	35.20	35.20	0	0	0	0	0	0	0		
Cut-off Saws & Sanding	4.20	0.42	0.42	0	0	0	0	0	0	0		
Reverb Furnace Combustion	0.06	0.24	0.24	0.02	3.22	0.18	2.71	3,888.23	0.06	0.06 Hexane		
Shell Core Natural Gas Combustion	0.02	0.07	0.06	0.01	0.97	0.05	0.81	1,166.47	0.02	0.02 Hexane		
Miscellaneous Natural Gas Combustion Units	0.11	0.44	0.44	0.00	5.73	0.32	4.82	6,921.04	0.11	0.10 Hexane		
Natural Gas Combustion (New Heat Treat)	0.01	0.04	0.04	0.00	0.54	0.03	0.45	653.22	0.01	0.01 Hexane		
Insignificant Solvent Usage	0	0	0	0	0	7.47	0	0	0.12	0.12 Toluene		
Maintenance Welding	0.003	0.003	0.003	0	0	0	0	0	2.67E-4	2.62E-4 Manganese		
Fugitive Emissions Paved Roads	0.76	0.15	0.04	0	0	0	0	0	0	0		
Total PTE of Entire Source	205.11	81.10	80.98	0.23	10.54	17.41	51.43	12,699.91	11.82	4.51 Total Hydrocarbons		
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10		
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA		

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	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
Process/ Emission Unit	PM	PM10*	PM2.5	SO ₂	NOx	VOC	СО	GHGs as CO₂e**	Total HAPs	Worst Single HAP

^{*}Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

MSOP Status

- (a) This revision to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).
- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

(c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
 MSOP applicability is discussed under the Permit Level Determination MSOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD)) This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326

^{**}The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

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IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

 The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new/modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 326 IAC 2-6 (Emission Reporting)
 Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
 Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
 Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

Sandblast Cabinet

(o) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the sandblast cabinet (SAB-01) shall not exceed 1.10 pounds per hour when operating at a process weight rate of 0.14 tons per hour.
The pound per hour limitation was calculated as follows:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$
 where $E =$ rate of emission in pounds per hour and $P =$ process weight rate in tons per hour

Based on the calculations provided in Appendix A, the potential uncontrolled PM emission rate for the sandblast cabinet is:

 $PM = 50.28 \text{ tons/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 11.48 \text{ lbs/hr}$

The potential, uncontrolled PM emissions from the sandblast cabinet of 11.48 pounds of PM per hour is greater than the allowable rate of 1.10 pounds of PM per hour. Therefore, a control device is needed for this emission unit to comply with this rule. The fabric filter for control will be required to be in operation at all times the sandblast cabinet is in operation.

Cope and Drag Castings Knockout

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(o) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The addition of the unpermitted cope and drag casting knockout machine, identified as Knockout6 (constructed in 1982), will not change the process weight rate for the entire knockout system combined because this unit has been accounted for in the potential emissions but has inadvertently been left out of the equipment list in prior permit approvals; therefore, the applicability under 326 IAC 6-3-2 (see below) will not change as a result of this revision.

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the combined knockout operations shall not exceed five and sixty-six hundredths (5.66) pounds per hour when operating at a process weight rate of three thousand two hundred forty (3,240) pounds (one and sixty-two hundredths (1.62) tons) per hour. The pound per hour limitation was calculated as follows:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$
 where $E =$ rate of emission in pounds per hour and $P =$ process weight rate in tons per hour

Based on the calculations provided in Appendix A, the potential uncontrolled PM emission rate for the combined knockout operations, is:

$$PM = 2.84 \text{ tons/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.65 \text{ lbs/hr}$$

The potential uncontrolled PM emissions from the combined knockout operations are sixty-five hundredths (0.65) pounds of PM per hour, which is less than the allowable rate of five and sixty-six hundredths (5.66) pounds of PM per hour. Therefore, the combined knockout operations are in compliance with this rule and a control device is not needed for these emission units.

Two (2) New Heat Treat Furnaces

- (h) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
 The two (2) new natural gas-fired heat treat furnaces are not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, these emission units does not meet the definition of an indirect heating unit.
- (i) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
 The two (2) new natural gas-fired heat treat furnaces are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.
- (j) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
 The potential, and actual, emissions from the two (2) new heat treat furnaces, each, are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively. Therefore, 326 IAC 7-1.1-2 does not apply to two (2) new heat treat furnaces, and the requirements are not included in the permit.
- (k) 326 IAC 8 (Volatile Organic Compounds Limitations)
 There are no VOC Rules applicable to the two (2) new natural gas-fired heat treat furnaces.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination and monitoring requirements applicable to this proposed revision are as follows:

Emission Unit Control Device	Parameter	Frequency	Range	Excursions and Exceedances
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Hunter Sand System #2 and	Baghouse #6	Pressure Drop	once per day	1.0 to 8.0 inches	Response Steps
Wheelabrator Shotblast Unit SB-5	#6 (Stack #14)	Visible Emissions	once per day	Normal - Abnormal	Response Steps

The fabric filter for the Sandblast Cabinet exhausts indoors and is also not designed for pressure drop readings. ON April 5, 2013, the source provided the following explanation: The sandblast cabinet is not an industrial unit. It is a glovebox cabinet with a small bag dust collector attached to the side. This dust collector contains a filter similar to a vacuum cleaner. The unit is not designed for monitoring pressure drop.

Prior to this revision, the Hunter Sand System #2 was controlled by Baghouse #4, and the Wheelabrator Shotblast Unit SB-5 was controlled by Baghouse #5. In addition, a visible emissions notation requirement has been added since Baghouse #6 exhausts outside.

(b) There are no testing requirements applicable to this proposed revision.

Proposed Changes

- (a) The following changes listed below are due to the proposed revision.
 - Section A.2 Emission Units and Pollution Control Equipment Summary has been updated with the changes described above.
 - Section D.1 has been updated with the equipment changes and to update permit terms and conditions.
- (b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit.
 - Several of IDEM's branches and sections have been renamed. Therefore, IDEM has
 updated the addresses listed in the permit. References to "Permit Administration and
 Development Section" and the "Permits Branch" have been changed to "Permit
 Administration and Support Section". References to "Asbestos Section", "Compliance
 Data Section", "Air Compliance Section", and "Compliance Branch" have been changed
 to "Compliance and Enforcement Branch".
 - Section A.1 of the permit and the reporting forms have been revised to remove all references to the source mailing address. IDEM, OAQ will continue to maintain records of the mailing address.
 - 3. For clarity, IDEM has changed references to the general conditions: "in accordance with Section B", in accordance with Section C", or other similar language to "Section C...contains the Permittee's obligations with regard to the records required by this condition."
 - 4. IDEM has decided that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore all timelines have been switched to "no later than" or "not later than" except when the underlying rule states "within."
 - 5. IDEM has determined that rather than having a certification condition and various references throughout the permit as to whether a particular report, notice, or correspondence needs to include a certification, the specific conditions that require an affirmation of truth and completeness shall state so. The certification condition has been removed. All statements to whether a certification, pursuant to the former Section B -

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> Certification, is needed or not have been removed. Section B - Credible Evidence and Section C - Asbestos Abatement Projects still require certification as the underlying rules also require certifications.

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- 6. IDEM has decided to clarify the requirements of Section B – Preventive Maintenance Plan.
- 7. IDEM has revised Section B - Permit Renewal paragraph (c) to state which rule establishes the authority to set a deadline for the Permittee to submit additional information.
- 8. IDEM has added 326 IAC 5-1-1 to the exception clause of Section C - Opacity, since 326 IAC 5-1-1 does list exceptions.
- 9. IDEM has revised Section C - Incineration to more closely reflect the two underlying rules.
- 10. IDEM has removed the first paragraph of Section C - Performance Testing as due to the fact that specific testing conditions elsewhere in the permit will specify the timeline and procedures.
- 11. IDEM has removed Section C - Monitoring Methods. The conditions that require the monitoring or testing, if required, state what methods shall be used.
- 12. IDEM has revised Section C - Response to Excursions or Exceedances. The introduction sentence has been added to clarify that it is only when an excursion or exceedance is detected that the requirements of this condition need to be followed. The word "excess" was added to the last sentence of paragraph (a) because the Permittee only has to minimize excess emissions. The middle of paragraph (b) has been deleted as it was duplicative of paragraph (a). The phrase "or are returning" was added to subparagraph (b)(2) as this is an acceptable response assuming the operation or emission unit does return to normal or its usual manner of operation. The phrase "within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable" was replaced with "normal or usual manner of operation" because the first phrase is just a limited list of the second phrase. The recordkeeping required by paragraph (e) was changed to require only records of the response because the previously listed items are required to be recorded elsewhere in the permit.
- 13. IDEM has revised Section C - Actions Related to Noncompliance Demonstrated by a Stack Test. The requirements to take response steps and minimize excess emissions have been removed because Section C - Response to Excursions or Exceedances already requires response steps related to exceedances and excess emissions minimization. The start of the timelines was switched from "the receipt of the test results" to "the date of the test." There was confusion if the "receipt" was by IDEM, the Permittee, or someone else. Since the start of the timelines has been moved up, the length of the timelines was increased. The new timelines require action within a comparable timeline; and the new timelines still ensure that the Permittee will return to compliance within a reasonable timeframe.
- 14. The voice of paragraph (b) of Section C - General Record Keeping Requirements has been changed to clearly indicate that it is the Permittee that must follow the requirements of the paragraph.
- 15. IDEM has included the replacement of an instrument as an acceptable action in Section D - Parametric Monitoring.
- 16. The word "status" has been added to Section D - Record Keeping Requirements. The

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Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this.

Deleted language appears as strikethrough text and new language appears as **bold** text:

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary aluminum foundry and die casting source which melts only clean charge, customer returns or internal scrap.

Source Address: 1036 Old Highway 27, Winchester, Indiana 47394

Mailing Address: 550 Liberty Rd,, Delaware, OH 43015

General Source Phone Number: 740-363-1941

SIC Code: 3363 (Aluminum Die-castings), 3365 (Aluminum

Foundries)

County Location: Randolph

Source Location Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit Program

Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories, under US EPA memo

dated December 4, 1998.

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

(a) Old Building Operations

- (1) Two (2) die cast crucible furnaces, melting only "clean charge" aluminum for the Die Casting Line, identified as Furnace #1 Die Cast and Furnace #2 Die Cast, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to stacks #2 and #4, respectively;
- (2) Two (2) die cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Die Cast Machines #1 and #2, constructed prior to 1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (3) One (1) die cast crucible furnace, melting only "clean charge" aluminum for the Die Casting Line, identified as Furnace #5 Die Cast, constructed in 1996, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of sixty (60) pounds (three hundredths (0.03) tons) of aluminum per hour, uncontrolled and exhausting to stack #6;
- (4) One (1) die cast machine where aluminum castings are formed using a metal mold (pouring/casting/cooling), identified as Die Cast Machine #5, constructed in 1996, with a maximum throughput capacity of sixty (60) pounds (three hundredths (0.03) tons) of aluminum per hour, uncontrolled and exhausting to the inside of the building;
- (5)(1) Two (2) perm mold crucible furnaces, melting only "clean charge" aluminum for the Perm Mold Casting Line, identified as Perm Mold Crucible Furnace #1 and Perm Mold Crucible Furnace #2, constructed prior to 1970, having a maximum heat input

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capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;

- (6)(2) Two (2) perm mold cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Perm Mold Casting Machines #1 and #2, constructed prior to 1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (7)(3) One (1) Wheelabrator shotblast machine, serving the Perm Mold Casting Line, identified as SB-3, constructed in 1990, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 3, and exhausting to the outside;
- (8)(4) One (1) Spinner Hanger shotblast machine, serving the Perm Mold Casting Line, identified as SB-4, constructed in 1998, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 1, and exhausting to the outside;
- (9)(5) Four (4) cope and drag crucible furnaces, melting only "clean charge" aluminum for the Cope and Drag Casting Line, identified as Crucibles #1 #4, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (10)(6) One (1) cope and drag pouring and cooling line where aluminum is poured into sand molds (pouring/casting/cooling), identified as Cope and Drag Casting, constructed in 2007, with a maximum throughput capacity of two hundred forty (240) pounds (twelve hundredths (0.12) tons) of aluminum and one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, respectively, uncontrolled and exhausting to the inside of the building;
- (11)(7) One (1) cope and drag sand system, identified as Cope and Drag Muller Sand System, constructed prior to 1970, with a maximum capacity of one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, uncontrolled and exhausting to the inside of the building;
- (12)(8) One (1) Two (2) cope and drag castings knockout machines, identified as Knockout-5 and Knockout-6, constructed in 1982, with a maximum throughput capacity of seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, each, uncontrolled and exhausting to the inside of the building;
- (13)(9) Nine (9) shell core machines, with a combined maximum heat input capacity of two and twenty-five hundredths (2.25) MMBtu/hr, and a combined maximum throughput capacity of two hundred fifty-five (255) pounds (one thousand two hundred seventy-five ten-thousandths (0.1275) tons) of cores per hour and seven hundred sixty-five (765) pounds (three thousand eight hundred twenty-five ten-thousandths (0.3825) tons) of sand per hour, uncontrolled and exhausting to the inside of the building, and consisting of the following;
 - (A) Six (6) shell core machines, identified as Core Machines #1-6, each constructed in 1996;

- (B) One (1) shell core machine, identified as Core Machine #7, constructed in 2000; and
- (C) Two (2) shell core machines, identified as Core Machines #8 and #9, each constructed in 2002, each;
- (14)(10)One (1) clean sand storage silo, serving the shell core operations, identified as Sand Storage Silo, constructed prior to 1970, with a maximum capacity of one hundred twenty thousand (120,000) pounds (twenty (20) tons);
- (11) One (1) sandblast cabinet, identified as SAB-01, constructed in 1996, with a maximum capacity of two hundred eighty (280) pounds (0.14 tons) of sand per hour, controlled by a fabric filter, and exhausting to the inside of the building;
- (b) New Building Operations

...

(3) One (1) Hunter sand system, identified as Hunter Sand System #2, constructed in 1999, with a maximum capacity of nine (9) tons of sand per hour, controlled by a baghouse dust collector, identified as Baghouse 4 Baghouse #6, and exhausting to stack #14 the inside of the building;

...

(7) One (1) Wheelabrator shotblast machine, identified as SB-5, constructed in 1999, with a maximum throughput capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 5 Baghouse #6, and exhausting to stack #14. the inside of the building.

...

- (f) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, including the following:
 - (1) Two (2) heat treat furnaces, each constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, each, uncontrolled and exhausting to stacks #9 and #10;
 - One (1) age oven, constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, uncontrolled and exhausting to the inside of the building;
 - (3) Two (2) heat treat furnaces, constructed in 2013, with a maximum heat input capacity of sixty-three hundredths (0.63) million British thermal units per hour, each, uncontrolled and exhausting to stacks #12 and #13, respectively.

. . .

SECTION B GENERAL CONDITIONS

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M135-26992-00024, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act;
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state

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that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management Compliance Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, IN 46204-2251

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management Compliance Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM,

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OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M135-26992-00024 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.13 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7.

Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management Permits Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the

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deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management Permits Branch, Office of Air Quality 100 North Senate Avenue MC-61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.15 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.16 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management Permits Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due within thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.19 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

...

SECTION B

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M135-26992-00024, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit,

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this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management Compliance and Enforcement Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is

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on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management Compliance and Enforcement Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M135-26992-00024 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (4) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.15 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request.

[326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.18 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.

- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management Asbestos Section, Office of Air Quality 100 North Senate Avenue MC 61-52 IGCN 1003 Indianapolis, Indiana 46204-2251

of at least 0.75 cubic feet on all facility components.

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control
 The Permittee shall comply with the applicable emission control procedures in
 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control
 requirements are applicable for any removal or disturbance of RACM greater than three
 (3) linear feet on pipes or three (3) square feet on any other facility components or a total
- (f) Demolition and Renovation The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Licensed Asbestos Inspector
 The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator,
 prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to
 thoroughly inspect the affected portion of the facility for the presence of asbestos. The
 requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251 Cast Metals Technologies Page 28 of 43 Winchester, Indiana TSD for MSOP SPR No. 135-32888-00024

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no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.13 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.14 Response to Excursions or Exceedances

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by

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excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

- (1) initial inspection and evaluation;
- (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
- (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.16 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

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(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.17 General Record Keeping Requirements [326 IAC 2-6.1-5]

Permit Reviewer: Sarah Street

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.18 — General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

...

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

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C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

Fugitive Dust Emissions [326 IAC 6-4] C.6

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twentyfive (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - When the amount of affected asbestos containing material increases or (1) decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - Removal or demolition contractor; or (B)
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- The notice to be submitted shall include the information enumerated in (d) 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management

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Compliance and Enforcement Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

- (e) Procedures for Asbestos Emission Control
 The Permittee shall comply with the applicable emission control procedures in
 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control
 requirements are applicable for any removal or disturbance of RACM greater than
 three (3) linear feet on pipes or three (3) square feet on any other facility
 components or a total of at least 0.75 cubic feet on all facility components.
- (f) Demolition and Renovation
 The Permittee shall thoroughly inspect the affected facility or part of the facility
 where the demolition or renovation will occur for the presence of asbestos
 pursuant to 40 CFR 61.145(a).
- (g) Indiana Licensed Asbestos Inspector
 The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or
 operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos
 Inspector to thoroughly inspect the affected portion of the facility for the presence
 of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not
 federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.9 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management Compliance and Enforcement Branch, Office of Air Quality 100 North Senate Avenue MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (c) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;

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Permit Reviewer: Sarah Street

- (2) review of operation and maintenance procedures and records; and/or
- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C Performance Testing, of this permit exceed the level specified in any condition of
 this permit, the Permittee shall submit a description of its response actions to
 IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

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C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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Unless otherwise specified in this permit, for all record keeping requirements not (b) already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

Reports required by conditions in Section D of this permit shall be submitted to: (a)

Indiana Department of Environmental Management Compliance and Enforcement Branch, Office of Air Quality **100 North Senate Avenue** MC 61-53 IGCN 1003 Indianapolis, Indiana 46204-2251

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- The first report shall cover the period commencing on the date of issuance of this (c) permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Aluminum foundry and die casting operations

- (a) Old Building Operations
 - Two (2) die cast crucible furnaces, melting only "clean charge" aluminum for the Die Casting Line, identified as Furnace #1 Die Cast and Furnace #2 Die Cast, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5)

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MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to stacks #2 and #4, respectively:

- (2) Two (2) die cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Die Cast Machines #1 and #2, constructed prior to 1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (3) One (1) die cast crucible furnace, melting only "clean charge" aluminum for the Die Casting Line, identified as Furnace #5 Die Cast, constructed in 1996, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of sixty (60) pounds (three hundredths (0.03) tons) of aluminum per hour, uncontrolled and exhausting to stack #6;
- (4) One (1) die cast machine where aluminum castings are formed using a metal mold (pouring/casting/cooling), identified as Die Cast Machine #5, constructed in 1996, with a maximum throughput capacity of sixty (60) pounds (three hundredths (0.03) tons) of aluminum per hour, uncontrolled and exhausting to the inside of the building;
- (5)(1) Two (2) perm mold crucible furnaces, melting only "clean charge" aluminum for the Perm Mold Casting Line, identified as Perm Mold Crucible Furnace #1 and Perm Mold Crucible Furnace #2, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (6)(2) Two (2) perm mold cast machines where aluminum castings are formed using metal molds (pouring/casting/cooling), identified as Perm Mold Casting Machines #1 and #2, constructed prior to 1970, with a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (7)(3) One (1) Wheelabrator shotblast machine, serving the Perm Mold Casting Line, identified as SB-3, constructed in 1990, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 3, and exhausting to the outside:
- (8)(4) One (1) Spinner Hanger shotblast machine, serving the Perm Mold Casting Line, identified as SB-4, constructed in 1998, with a maximum capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 1, and exhausting to the outside:
- (9)(5) Four (4) cope and drag crucible furnaces, melting only "clean charge" aluminum for the Cope and Drag Casting Line, identified as Crucibles #1 #4, constructed prior to 1970, having a maximum heat input capacity of one and five tenths (1.5) MMBtu/hr, each, and a maximum throughput capacity of six hundred (600) pounds (three tenths (0.3) tons) of aluminum per hour, each, uncontrolled and exhausting to the inside of the building;
- (10)(6) One (1) cope and drag pouring and cooling line where aluminum is poured into sand molds (pouring/casting/cooling), identified as Cope and Drag Casting, constructed in 2007, with a maximum throughput capacity of two hundred forty (240) pounds (twelve

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hundredths (0.12) tons) of aluminum and one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, respectively, uncontrolled and exhausting to the inside of the building;

- (11)(7) One (1) cope and drag sand system, identified as Cope and Drag Muller Sand System, constructed prior to 1970, with a maximum capacity of one thousand four hundred forty (1,440) pounds (seventy-two thousandths (0.72) tons) of sand per hour, uncontrolled and exhausting to the inside of the building;
- (12)(8) One (1) Two (2) cope and drag castings knockout machines, identified as Knockout-5 and Knockout-6, constructed in 1982, with a maximum throughput capacity of seven hundred (700) pounds (thirty-five hundredths (0.35) tons) of aluminum castings per hour, each, uncontrolled and exhausting to the inside of the building:
- (13)(9) Nine (9) shell core machines, with a combined maximum heat input capacity of two and twenty-five hundredths (2.25) MMBtu/hr, and a combined maximum throughput capacity of two hundred fifty-five (255) pounds (one thousand two hundred seventy-five ten-thousandths (0.1275) tons) of cores per hour and seven hundred sixty-five (765) pounds (three thousand eight hundred twenty-five ten-thousandths (0.3825) tons) of sand per hour, uncontrolled and exhausting to the inside of the building, and consisting of the following;
 - (A) Six (6) shell core machines, identified as Core Machines #1-6, each constructed in 1996:
 - (B) One (1) shell core machine, identified as Core Machine #7, constructed in 2000; and
 - (C) Two (2) shell core machines, identified as Core Machines #8 and #9, each constructed in 2002, each;
- (14)(10) One (1) clean sand storage silo, serving the shell core operations, identified as Sand Storage Silo, constructed prior to 1970, with a maximum capacity of one hundred twenty thousand (120,000) pounds (twenty (20) tons);
- (11) One (1) sandblast cabinet, identified as SAB-01, constructed in 1996, with a a maximum capacity of two hundred eighty (280) pounds (0.14 tons) of sand per hour, controlled by a fabric filter, and exhausting to the inside of the building;
- (b) New Building Operations

...

(3) One (1) Hunter sand system, identified as Hunter Sand System #2, constructed in 1999, with a maximum capacity of nine (9) tons of sand per hour, controlled by a baghouse dust collector, identified as Baghouse 4 Baghouse #6, and exhausting to stack #14 the inside of the building;

...

(7) One (1) Wheelabrator shotblast machine, identified as SB-5, constructed in 1999, with a maximum throughput capacity of five hundred forty-two (542) pounds (two hundred seventy-one thousandths (0.271) tons) of metal castings per hour, controlled by a baghouse, identified as Baghouse 5 Baghouse #6, and exhausting to stack #14. the inside of the building.

...

- (f) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, including the following:
 - (1) Two (2) heat treat furnaces, each constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, each, uncontrolled and exhausting to stacks #9 and #10;
 - (2) One (1) age oven, constructed prior to 1970, with a maximum heat input capacity of seventy-five hundredths (0.75) million British thermal units per hour, uncontrolled and exhausting to the inside of the building;
 - (3) Two (2) heat treat furnaces, constructed in 2013, with a maximum heat input capacity of sixty-three hundredths (0.63) million British thermal units per hour, each, uncontrolled and exhausting to stacks #12 and #13, respectively.

. . .

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the facilities listed in this condition shall not exceed the pound per hour limitations listed in the table below:

Emission Unit	Process W	Particulate Emission Limit	
	(lbs/hr)	(tons/hr)	(lb/hour)
Die cast Crucible Melt, combined (Furnace #1, #2 & #5 Die Cast)	1,860	0.93	3.91
Perm Mold Crucible Melt, combined (Perm Mold Casting Machines #1 and #2)	600	0.30	1.83
Crucible Melt (Crucibles #1-#4, combined)	240	0.12	0.99
Reverb Furnace Melt (Reverberatory Furnace #2)	3,000	1.50	5.38
Knockout, combined (Knockout-2, Knockout-3, Knockout-4,& Knockout-5, and Knockout-6)	3,240	1.62	5.66
Cope & Drag Muller Sand System	1,440	0.72	3.29
Hunter Sand System #2	18,000	9.00	17.87
Shotblast, each (SB-3, SB-4 & SB-5)	542	0.271	1.71
Cutoff Saws & Sanding	1,440	0.72	3.29
Sandblast cabinet (SAB-01)	280	0.14	1.10

These limitations were calculated as follows:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$
 where $E =$ rate of emission in pounds per hour and $P =$ process weight rate in tons per hour

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...

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the one (1) sand system (Hunter Sand System #2), the one (1) sandblast cabinet (SAB-01), and the three (3) shotblast machines (SB-3, SB-4 and SB-5), and each of their respective pollution control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.4 Particulate Control

...

- (e) In order to comply with Condition D.1.1, the fabric filter for the sandblast cabinet, identified as SAB-01, shall be in operation and control emissions at all times when the sandblast cabinet is in operation.
- (e)(f) In the event that a bag or filter failure is observed in a multi-compartment unit, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.5 Visible Emissions Notations

(a) Visible emission notations of **each** the three (3) two (2) shotblast machines SB-3 and SB-4 (SB-3, SB-4 and SB-5), exhausts and the exhaust for shotblast machine SB-5 and the Hunter Sand System #2 (stack #14) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

...

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. in accordance with Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

...

D.1.6 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the one (1) sand system (Hunter Sand System #2) and shotblast machine SB-5 at least once per week day when the process exhausting to the control device is in operation. When for any one reading, the pressure drop across the baghouse or dust collection system is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range

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is determined during the latest stack test. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

- (b) The Permittee shall record the pressure drop across the baghouses used in conjunction with the three (3) two (2) shotblast machines (SB-3, and SB-4 and SB-5), at least once per day when the process exhausting to the control device is in operation. When for any one reading, the pressure drop across the baghouse or dust collection system is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C-Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (c) The instruments used for determining the pressure shall comply with Section C Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated **or replaced** at least once every six (6) months.

D.1.7 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B Emergency Provisions)(Section C Response to Excursions or Exceedances).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions)(Section C - Response to Excursions or Exceedances).

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.8 Record Keeping Requirements

..

Winchester, Indiana Permit Reviewer: Sarah Street

- (a) To document **the** compliance **status** with Condition D.1.2, the Permittee shall maintain records of the type of aluminum melted in the furnaces sufficient to show compliance with Condition D.1.3.
- (b) To document **the** compliance **status** with Condition D.1.5, the Permittee shall maintain a daily record of visible emission notations of the three (3) two (2) shotblast machines SB-3 and SB-4 (SB-3, SB-4 and SB-5), exhausts and the exhaust for shotblast machine SB-5 and the Hunter Sand System #2 (stack #14) when venting to the atmosphere. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day).
- (c) To document **the** compliance **status** with Condition D.1.6(a), the Permittee shall maintain records once per week **day** of the pressure drop across the baghouse used in conjunction with the one (1) sand system **and shotblast machine SB-5** during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading, (e.g., the process did not operate that day).
- (d) To document **the** compliance **status** with Condition D.1.6(b), the Permittee shall maintain records once per day of the pressure drop across the baghouses used in conjunction with the three (3) two (2) shotblast machines **SB-3 and SB4** during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading, (e.g., the process did not operate that day).
- (e) All records shall be maintained in accordance with Section C General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

MINOR SOURCE OPERATING PERMIT (MSOP) CERTIFICATION

Source Name:	Cast Metals Technologies
Source Address:	1036 Old Highway 27, Winchester, Indiana 47394
Mailing Address:	550 Liberty Rd,, Delaware, OH 43015
MSOP No.:	M135-26992-00024
	tion shall be included when submitting monitoring
	or other documents as required by this peri

This certification shall be included when submitting monitoring, testing report or other documents as required by this permit.	s/results
Please check what document is being certified:	
-—-Annual Compliance Certification Letter	
-—-Test Result (specify)	
- Report (specify)	
Notification (specify)	
- ☐ Affidavit (specify)	_

Cast Metals Technologies Winchester, Indiana Permit Reviewer: Sarah Street Page 43 of 43 TSD for MSOP SPR No. 135-32888-00024

- Other (specify)
I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Date:
-
···

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE AND ENFORCEMENT BRANCH

MINOR SOURCE OPERATING PERMIT ANNUAL NOTIFICATION

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on February 27, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Significant Permit Revision No. 135-32888-00024. The staff recommends to the Commissioner that this MSOP Significant Permit Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Sarah Street at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.
- (b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A: Emissions Calculations Summary of Emissions

Company Name: Cast Metals Technologies
Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394
Permit Number: M135-32888-00024
Reviewer: Sarah Street

	Uncontrolled Potential to Emit (tons/year)										
Emission Unit	PM	PM10	PM2.5	SO2	NOx	voc	со	GHGs as CO2e	Total HAPs	Worst	Single HAP
Perm Mold Crucible Melt	1.97	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.003	0.003	HCI
Crucible Melt	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.001	0.001	HCI
Reverb Furnace Melt	9.86	9.86	9.86	0.00	0.00	0.00	0.00	0.00	0.02	0.02	HCI
Perm Mold Casting	0.02	0.02	0.02	0.03	0.01	0.18	0.00	0.00	0.00	0.00	-
Cope & Drag Pouring & Cooling	0.01	0.01	0.01	0.01	0.01	0.07	3.15	5.26	0.00	0.00	
Hunter Pouring & Cooling & Liftout	0.01	0.01	0.01	0.13	0.07	0.92	39.42	65.70	0.00	0.00	
Knockout	2.84	2.84	2.84	0.00	0.00	7.88	0.00	0.00	0.00	0.00	
Cope & Drag Muller Sand System	11.35	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hunter Sand System	62.28	21.29	21.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Shell Core	0.00	0.00	0.00	0.00	0.00	0.30	0.07	0.00	11.48	4.51	Total Hydrocarbons
Shot Blast	60.54	6.05	6.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sand Blast	50.28	35.20	35.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Finishing Operations (cut-off saws and sandling)	4.20	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Natural Gas Combustion (Reverb Furnace)	0.06	0.24	0.24	0.02	3.22	0.18	2.71	3,888.23	0.06	0.06	Hexane
Natural Gas Combustion (Shell Core)	0.02	0.07	0.07	0.01	0.97	0.05	0.81	1,166.47	0.02	0.02	Hexane
Natural Gas Combustion (Miscellaneous)	0.11	0.44	0.44	0.03	5.73	0.32	4.82	6,921.04	0.11	0.10	Hexane
Natural Gas Combustion (New Heat Treat)	0.01	0.04	0.04	0.00	0.54	0.03	0.45	653.22	0.01	0.01	Hexane
Insignificant Solvent Usage	0.00	0.00	0.00	0.00	0.00	7.47	0.00	0.00	0.12	0.12	Toulene
Maintenance Welding	0.003	0.003	0.003	0.00	0.00	0.00	0.00	0.00	2.67E-04	2.62E-04	Manganese
Paved Roads	0.76	0.15	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Emissions	205.11	81.10	80.98	0.23	10.54	17.41	51.43	12,699.91	11.82	4.51	Total Hydrocarbons
Registration Max. Threshold	25	25	25	25	25	25	100	NA	25		10
Title V PTE Min. Threshold	100	100	100	100	100	100	100	100,000	25	10	

Emission Calculations Uncontrolled Potential Emissions from Revision

Company Name: Cast Metals Technologies
Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394
Permit Number: M135-32888-00024
Reviewer: Sarah Street

Uncontrolled Potential to Emit of Revision (tons/year)											
								GHGs as	Total		
Emission Unit	PM	PM10	PM2.5	SO2	NOx	voc	CO	CO2e	HAPs	Worst Si	ngle HAP
Knockout #6 *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sandblast Unit	50.28	35.20	35.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Heat Treat Furnaces (2 new)	0.01	0.04	0.04	0.00	0.54	0.03	0.45	653.22	0.01	0.01	Hexane
Increase in PTE	50.29	35.24	35.24	0.00	0.54	0.03	0.45	653.22	0.01	0.01	Hexane

^{*}The uncontrolled PTE for Knockout #6 has already been accounted for in the uncontrolled PTE for Knockout units #2-5

Appendix A: Emissions Calculations Unlimited/Uncontrolled Potential Emissions from Secondary Aluminum (clean charge) Processing

Company Name: Cast Metals Technologies
Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394
Permit Number: M135-32888-00024 Sarah Street Reviewer:

Process	Max Hourly Capacity (per hour)	Potential Annual Capacity (per year)	Units	
Melting				
2 Perm Mold Furnaces #1 & #2	0.30	2,628	Tons Metal	
Crucible Furnaces #1, #2, #3 & #4	0.12	1,051	Tons Metal	
Reverberatory Furnace #1 & #2	1.50	13,140	Tons Metal	

Casting			
Permanent Mold Casting	0.30	2,628	Tons Metal
Cope & Drag Pouring	0.12	1,051	Tons Metal
Cope & Drag Knockout #5 and #6	0.12	1,051	Tons Metal
Hunter Pouring, Cooling & Casting Removal	1.50	13,140	Tons Metal
Hunter Knockout #2, #3, & #4	1.50	13,140	Tons Metal

Process	Max Hourly Capacity (per hour)	Potential Annual Capacity (per year)	Units	
Mold & Core Production				
Cope and Drag Muller Sand System	0.720	6,307	Tons Sand	
Hunter Sand System	9	78,840	Tons Sand	
Shell Core Machines	0.128	1,117	Tons Cores	

Finishing			
Shotblast SB-3	0.271	2,374	Tons Metal
Shotblast SB-4	0.271	2,374	Tons Metal
Shotblast SB-5	0.271	2,374	Tons Metal
Cutoff Saws and Grinding (Hunter Line)	0.720	6,307	Tons Metal

		Emission Factors										
Emission Unit	РМ	PM10	PM2.5	SO2	Nox	voc	CO ⁽⁴⁾	GHGs as CO2e (10)	HF	HCI (2)	Units	
Perm Mold Crucible Mell ⁽¹⁾	1.5	1.5	1.5	0	0	0	0	0	0	0.0026	lbs/tm & lbs/tf	
Crucible Melt (1)	1.5	1.5	1.5	0	0	0	0	0	0	0.0026	lbs/tm & lbs/tf	
Reverb Furnace Melt ⁽¹⁾	1.5	1.5	1.5	0	0	0	0	0	0	0.0026	lbs/tm & lbs/tf	
Perm Mold Casting (3)	0.015	0.015	0.015	0.02	0.01	0.14	0	0	0	0	lbs/tm	
Cope & Drag Pouring, Casting & Cooling (3)	0.015	0.015	0.015	0.02	0.01	0.14	6.0	10	0	0	lbs/tm	
Hunter Pouring, Casting, Cooling & Liftout (3)	0.015	0.015	0.015	0.02	0.01	0.14	6.0	10	0	0	lbs/tm	
Knockout #2-#6 (5)	0.4	0.4	0.4	0	0	1.2	0	0	0	0	lbs/tm	
Cope & Drag Muller Sand System (6)	3.60	0.54	0.54	0	0	0	0	0	0	0	lbs/tm	
Hunter Sand System (6) (7)	1.58	0.54	0.54	0	0	0	0	0	0	0	lbs/ts	
Shell Core (8)	0	0	0	0	0	0.534	0.126	0	0	0	lbs/tc	
Shotblast (9)	17	1.7	1.7	0	0	0	0	0	0	0	lbs/tm	

Abbreviations
CERP = Casting Emission Reduction Program tm = tons of metal

Emission Factors

- Onsite Source Test Data obtained 11/20/00. Emission factors for metal melt include emissions generated from the use of cover, wall and cleaning fluxes. Emission factor for HCL from other similar IDEM permits, such as #177-20368-00050 and 151-15211-00018. Units are in pounds/ton flux.
- Emission factor for HCL from other similar IDEM permits, such as #1/r/cusoe-output and 10 1-1021 (FOURTH OF INDICATION OF INDICA

- Emission factor for OC based on all IDEM retief used invalide or immed services oppositions for occurrence of immediate invalided in the services of the servi

- (6) Emission factors for PMPM-10 are from AP-42, Ch. 12.10, Fifth edition 1995, Grey Iron Foundries, Sand handling (SCC 3-04-003-50)
 (7) Emission factor for PMPM-10 are from AP-42, Ch. 12.10, Fifth edition 1995, Grey Iron Foundries, Sand handling (SCC 3-04-003-50)
 (8) Emission factor for PMPM-10 are susumptions formed from a mass balance study performed by the source. IDEM has determined that a control device shall be required at all times the unit is in operation, due to the lack of test data verifying the alternate emission factor for this unit.
 (8) CERP Report "Emissions from Shell Core Making and Storage", September 2007, Publication # 1413-122 HN
 (8) Emission factors for PM and PM-10 are from AP-42, Ch. 12.10, Fifth edition 1995, Grey Iron Foundries, Cleaning, finishing (SCC 3-04-003-40)
 (8) GHGs as CO2e emissions is equal to CO2 emissions. CO2 emission factor from American Foundry Society (AFS) Data, "Pouring, Cooling, and Shakeout CO/CO2 Emission Sources and Variability" (AFS 08-031)

	Uncontrolled Potential to Emit (tons/year)										
Emission Unit	PM	PM10	PM2.5	SO2	Nox	voc	со	GHGs as CO2e	HF	HCI	
Perm Mold Crucible Melt	1.97	1.97	1.97	0	0	0	0	0	0	0.003	
Crucible Melt	0.79	0.79	0.79	0	0	0	0	0	0	0.001	
Reverb Furnace Melt	9.86	9.86	9.86	0	0	0	0	0	0	0.02	
Perm Mold Casting	0.02	0.02	0.02	0.03	0.01	0.18	0	0	0	0	
Cope & Drag Pouring, Casting & Cooling	0.01	0.01	0.01	0.01	0.01	0.07	3.15	5.26	0	0	
Hunter Pouring, Casting, Cooling & Liftout	0.01	0.01	0.01	0.13	0.07	0.92	39.42	65.70	0	0	
Knockout #2-#6	2.84	2.84	2.84	0	0	7.88	0	0	0	0	
Cope & Drag Muller Sand System	11.35	1.70	1.70	0	0	0	0	0	0	0	
Hunter Sand System #2	62.28	21.29	21.29	0	0	0	0	0	0	0	
Shell Core	0	0	0	0	0	0.30	0.07	0.00	0	0	
Shotblast SB-3	20.18	2.02	2.02	0	0	0	0	0	0	0	
Shotblast SB-4	20.18	2.02	2.02	0	0	0	0	0	0	0	
Shotblast SB-5	20.18	2.02	2.02	0	0	0	0	0	0	0	
Total Plant Wide Uncontrolled PTE (tons/year)	149.66	44.53	44.53	0.17	0.08	9.36	42.64	70.96	0	0.02	

Methodology
Uncontrolled Potential to Emit (tons/year) = (Potential Annual Capacity (tons/year) * Emission Factor)* 1ton/2000lbs

NOTES
All the furnaces melt "clean charge" as defined in the Secondary Aluminum NESHAP in 40 CFR 63 Subpart RRR.
All the furnaces use small amounts of flux to reduce the formation of oxides during the melting process, and for cleaning purposes. Emission factors for metal melt include emissions generated from the use of cover,

Wall all o clearling liuxes. Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a *regulated air pollutant*. US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

The allowable emissions (i.e., process weight rate limit) (lbs/hr) are calculated on page 5 of 13, of this Appendix.

Appendix A: Emissions Calculations Limited/Uncontrolled Potential to Emit from Secondary Aluminum (clean charge) Processing

Company Name: Cast Metals Technologies Idress City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394 Permit Number: M135-3288-00024 Reviewer: Sarah Street

Process	Max Hourly Capacity (per hour)	Potential Annual Capacity (per year)	Units	
Melting	•			
2 Perm Mold Furnaces #1 & #2	0.30	2,628	Tons Metal	
Crucible Furnaces #1, #2, #3 & #4	0.12	1,051	Tons Metal	
Reverberatory Furnace #1 & #2	1.50	13,140	Tons Metal	

Casting			
Permanent Mold Casting	0.30	2,628	Tons Metal
Cope & Drag Pouring	0.12	1,051	Tons Metal
Cope & Drag Knockout #5 & #6	0.12	1,051	Tons Metal
Hunter Pouring, Cooling & Casting Removal	1.50	13,140	Tons Metal
Hunter Knockout #2, #3, & #4	1.50	13,140	Tons Metal

Process	Max Hourly Capacity (per hour)	Potential Annual Capacity (per year)	Units	
Mold & Core Production				
Cope and Drag Muller Sand System	0.720	6,307	Tons Sand	
Hunter Sand System	9	78,840	Tons Sand	
Shell Core Machines	0.128	1,117	Tons Cores	

Finishing			
Shotblast SB-3	0.271	2,374	Tons Metal
Shotblast SB-4	0.271	2,374	Tons Metal
Shotblast SB-5	0.271	2,374	Tons Metal
Cutoff Saws and Grinding (Hunter Line)	0.720	6,307	Tons Metal

tc = tons of cores

Emission Unit	Emission Factors										
	PM	PM10	PM2.5	SO2	Nox	voc	CO (4)	GHGs as CO2e (10)	HF	HCI (2)	Units
Perm Mold Crucible Melt (1)	1.5	1.5	1.5	0	0	0	0	0	0	0.0026	lbs/tm & lbs/tf
Crucible Melt (1)	1.5	1.5	1.5	0	0	0	0	0	0	0.0026	lbs/tm & lbs/tf
Reverb Furnace Melt (1)	1.5	1.5	1.5	0	0	0	0	0	0	0.0026	lbs/tm & lbs/tf
Perm Mold Casting (3)	0.015	0.015	0.015	0.02	0.01	0.14	0	0	0	0	lbs/tm
Cope & Drag Pouring, Casting & Cooling (3)	0.015	0.015	0.015	0.02	0.01	0.14	6.0	10	0	0	lbs/tm
Hunter Pouring, Casting, Cooling & Liftout (3)	0.015	0.015	0.015	0.02	0.01	0.14	6.0	10	0	0	lbs/tm
Knockout #2-#6 (5)	0.4	0.4	0.4	0	0	1.2	0	0	0	0	lbs/tm
Cope & Drag Muller Sand System (6)	3.60	0.54	0.54	0	0	0	0	0	0	0	lbs/tm
Hunter Sand System (6) (7)	1.58	0.54	0.54	0	0	0	0	0	0	0	lbs/ts
Shell Core (8)	0	0	0	0	0	0.534	0.126	0	0	0	lbs/tc
Shotblast (9)	17	1.7	1.7	0	0	0	0	0	0	0	lbs/tm

Abbreviations
CERP = Casting Emission Reduction Program tf = tons of flux tm = tons of metal ts = tons of sand

Emission Factors

- Emission Factors

 Onsite Source Test Data obtained 11/20/00. Emission factors for metal melt include emissions generated from the use of cover, wall and cleaning fluo

 Emission factor for HCL from other similar IDEM permits, such as #177-20368-00050, #069-19499-00048 an#151-15211-00018. Units are in pounds/ton flux

 Emission factors for SO2, NOx and VOC are from FIRE 6.25: Secondary Aluminum Production, Pouring/Casting (SCC 3-04-001-14); and Grey Iron Foundries, Casting shakeout (SCC 3-04-003-3 Emission factors for PMPMI or eritom FIRE version 6.24 for 2 inc casting (3-04-008-73), which is the only available emission factor in FIRE for a pure metal of similar atomic weight.

 Emission factor for CO based on an IDEM letter titled "Notice of limited self-disclosure opportunity for CO emissions from PCS operations within the foundry sector".

- Emission factor for CO based on an IDEM letter titled "Notice of limited self-disclosure opportunity for CO emissions from PCS operations within the foundry sector".

 Emission factor for VOC is from FIRE 6.25 SCC# 3-04-003-31, AP-42 Ch. 12.10, Fifth edition 1995, for Grey Iron Foundrie

 Emission factor for PMO and Power April 200 in the Powe

	Limited Potential to Emit (tons/year)									
Emission Unit	PM	PM10	PM2.5	SO2	Nox	voc	со	GHGs as CO2e	HF	HCI
Perm Mold Crucible Melt	1.97	1.97	1.97	0	0	0	0	0	0	0.003
Crucible Melt	0.79	0.79	0.79	0	0	0	0	0	0	0.001
Reverb Furnace Melt	9.86	9.86	9.86	0	0	0	0	0	0	0.02
Perm Mold Casting	0.02	0.02	0.02	0.03	0.01	0.18	0	0	0	0
Cope & Drag Pouring, Casting & Cooling	0.01	0.01	0.01	0.01	0.01	0.07	3.15	5.26	0	0
Hunter Pouring, Casting, Cooling & Liftout	0.01	0.01	0.01	0.13	0.07	0.92	39.42	65.70	0	0
Knockout #2-#6	2.84	2.84	2.84	0	0	7.88	0	0	0	0
Cope & Drag Muller Sand System	11.35	1.70	1.70	0	0	0	0	0	0	0
Hunter Sand System #2	62.28	21.29	21.29	0	0	0	0	0	0	0
Shell Core	0	0	0	0	0	0.30	0.07	0.00	0	0
Shotblast SB-3**	7.49	2.02	2.02	0	0	0	0	0	0	0
Shotblast SB-4**	7.49	2.02	2.02	0	0	0	0	0	0	0
Shotblast SB-5**	7.49	2.02	2.02	0	0	0	0	0	0	0
Total Uncontrolled PTE, tons/year	111.59	44.53	44.53	0.17	0.08	9.36	42.64	70.96	0	0.02

Methodology

memonology
Uncontrolled Potential to Emit (tons/year) = (Potential Annual Capacity (tons/year) * Emission Factor)* 1ton/2000lbs
** 326 IAC 6-3.2 Allowable Emissions based on the Process Weight Rate
Process weight rate = Total weight of all materials introduced into any source operation (326 IAC 1-2-59(a)).
Allowable Emissions (tons/yr) = (4.10*(Process Weight Rate (lib/hr))*0.67)*8760hrs/yr)/2000lbs/ton

NOTES
All the furnaces melt 'clean charge' as defined in the Secondary Aluminum NESHAP in 40 CFR 63 Subpart RRR.
All the furnaces use small amounts of flux to reduce the formation of oxides during the melting process, and for cleaning purposes. Emission factors for metal melt include emissions generated from the use of cover, wall and cleaning fluxes.

The allowable emissions (i.e., process weight rate limit) (lbs/hr) is calculated on page 5 of 13, of this Appendix.
Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a 'regulated air pollutant'. US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Appendix A: Emissions Calculations 326 IAC 6-3-2(e) Allowable Rate of Emissions

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024
Reviewer: Sarah Street

Unit ID	* Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)	Allowable PM Emissions (tons/yr)
Perm Mold Crucible Melt, combined (Perm Mold Casting Machines #1 and #2)	600	0.30	1.83	8.02
Crucible Melt, combined (Crucibles #1-#4)	240	0.12	0.99	4.34
Reverb Furnace Melt (Reverberatory Furnace #2)	3,000	1.50	5.38	23.56
Knockout, combined (Knockout-2, Knockout-3, Knockout-4, Knockout-5 & Knockout-6)	3,240	1.62	5.66	24.81
Cope & Drag Muller Sand System	1,440	0.72	3.29	14.41
Hunter Sand System #2	18,000	9.00	17.87	78.27
Shotblast, each (SB-3, SB-4 & SB-5)	542	0.271	1.71	7.49
Cutoff Saws & Sanding	1,440	0.72	3.29	14.41

175.31

Methodology

< 250 tpy

*Process weight; weight rate (PWR): Total weight of all materials introduced into any source operation (326 IAC 1-2-59(a)).

Allowable Emissions (lb/hr) = 4.10(PWR(lb/hr))^0.67

Allowable Emissions (tons/yr) = (Allowable Emissions (lb/hr)*8760)/2000

NOTES

All the furnaces melt "clean charge" as defined in the Secondary Aluminum NESHAP in 40 CFR 63 Subpart RRR.

All the furnaces use small amounts of flux to reduce the formation of oxides during the melting process, and for cleaning purposes. Emission factors for metal melt include emissions generated from the use of cover, wall and cleaning fluxes. Therefore, flux usage has been incorporated into the PWR for each melting operation.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

HAP Emission Calculations Pouring-Cooling-Shakeout Binder Systems

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

Shell Core Machines

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content	VOC Emission Factor from Resin Evaporation	Potential VOC Emissions from resin evap
		((%)	(lb/ton cores)	(tons/yr)
#1-9	Varies	0.1275	0.06%	0.5	0.30

Pouring, Cooling and Shakeout

Annual Usage of Index Material	
(lbs/yr)	
402084	

Binder System
shell

	Binder System Type Emission Factors =>							
	Lbs. of Chemical Released to Air per Lbs. of							
	Index							
Pollutant	Shell	Pollutant	Pollutant					
		Emissions	Emissions					
	(Resin)	(lbs/yr)	(tons/yr)					
Acrolein	0.000047	18.898	0.009					
Ammonia	0.003860	1552.044	0.776					
Benzene	0.006667	2680.694	1.34					
Formaldehyde	0.000035	14.073	0.007					
Hydrogen Cyanide	0.010526	4232.336	2.12					
Hydrogen Sulfide	0.000094	37.796	0.019					
M-Xylene	0.000585	235.219	0.118					
Napthalene	0.000058	23.321	0.012					
Nitrogen Oxides	0.000994	399.671	0.200					
O-Xylene	0.000117	47.044	0.024					
Phenol	0.002456	987.518	0.494					
Sulfer Dioxide	0.003509	1410.913	0.705					
Toluene	0.002807	1128.650	0.564					
Total Aromatic Amines	0.002339	940.474	0.470					
Total C2 to C5 Aldehydes	0.000585	235.219	0.118					
Total Hydrocarbons	0.022421	9015.125	4.51					
Total HAPs	0.0571	22,959.00	11.48					

METHODOLOGY

 $HAPS\ emission\ rate\ (tons/yr) = Annual\ Usage\ (lbs/yr)\ ^*\ Emission\ Factor\ (lbs\ Chemical/lbs\ Index)\ ^*\ 1\ ton/2000\ lbs$

Appendix A: Emissions Calculations **Natural Gas Combustion Only** Reverberatory Furnace #2

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr

7.5

HHVPotential Throughput MMCF/yr mmBtu

64.4

mmscf

1020

		Pollutant							
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO		
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84		
					**see below				
Potential Emission in tons/yr	0.06	0.24	0.24	0.02	3.22	0.18	2.71		

^{*}PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics							
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total - Organics		
Potential Emission in tons/yr	6.763E-05	3.865E-05	2.415E-03	5.797E-02	1.095E-04	6.060E-02		

		HAPs - Metals						
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total - Metals		
Potential Emission in tons/yr	1.610E-05	3.543E-05	4.509E-05	1.224E-05	6.763E-05	1.765E-04		
-	•		•	•	Total HAPs	6.078E-02		
Methodology is the same as above.					Worst HAP	5.797E-02		

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas					
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2			
Potential Emission in tons/yr	3,865	0.1	0.1			
Summed Potential Emissions in tons/yr	3,865					
CO2e Total in tons/yr	3,888					

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

^{**}Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Appendix A: Emissions Calculations **Natural Gas Combustion Only**

Shell Core

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr

2.25

HHVmmBtu

Potential Throughput MMCF/yr

mmscf

19.3 1020

	Pollutant							
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO	
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84	
					**see below			
Potential Emission in tons/yr	0.02	0.07	0.07	0.01	0.97	0.05	0.81	

^{*}PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics							
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total - Organics		
Potential Emission in tons/yr	2.029E-05	1.159E-05	7.246E-04	1.739E-02	3.285E-05	1.818E-02		

		HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total - Metals	
Potential Emission in tons/yr	4.831E-06	1.063E-05	1.353E-05	3.671E-06	2.029E-05	5.295E-05	
					Total HAPs	1.823E-02	
Methodology is the same as above.					Worst HAP	1.739E-02	

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas					
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2			
Potential Emission in tons/yr	1,159	0.0	0.0			
Summed Potential Emissions in tons/yr	1,159					
CO2e Total in tons/yr	1,166					

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Appendix A: Emissions Calculations Natural Gas Combustion Only

Miscellaneous
Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024
Reviewer: Sarah Street

Heat Treat Furnace		MMBtu/hr
Age Oven	0.75	MMBtu/hr
Space Heating	2.1	MMBtu/hr
Crucible Heaters	9.0	MMBtu/hr
	13.35	MMBtu/hr

2 heat treat furnaces @ 0.75 MMBtu/hr each.

14 tube heaters @ 0.15 MMBtu/hr each.

6 crucible heaters @ 1.5 MMBtu/hr each, including;

Perm Mold Crucible Furnaces - #1 & #2; and
 Cope and Drag Crucible Furnaces - #1, #2, #3 & #4

 Heat Input Capacity
 HHV
 Potential Throughput

 MMBtu/hr
 mmBtu
 MMCF/yr

 mmscf
 13.35
 1020
 114.7

		Pollutant							
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO		
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84		
					**see below				
Potential Emission in tons/yr	0.11	0.44	0.44	0.03	5.73	0.32	4.82		

^{*}PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics							
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total - Organics		
Potential Emission in tons/yr	1.204E-04	6.879E-05	4.299E-03	1.032E-01	1.949E-04	1.079E-01		

		HAPs - Metals							
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total - Metals			
Potential Emission in tons/yr	2.866E-05	6.306E-05	8.026E-05	2.178E-05	1.204E-04	3.141E-04			
					Total HAPs	1.082E-01			
Methodology is the same as above					Worst HAP	1.032E-01			

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas					
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2			
Potential Emission in tons/yr	6,879	0.1	0.1			
Summed Potential Emissions in tons/yr	6,879					
CO2e Total in tons/yr	6,921					

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

 $Emission\ Factors\ are\ from\ AP\ 42,\ Table\ 1.4-2\ SCC\ \#1-02-006-02,\ 1-01-006-02,\ 1-03-006-02,\ and\ 1-03-006-03.$

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

 $Emission \ (tons/yr) = Throughput \ (MMCF/yr) \ x \ Emission \ Factor \ (lb/MMCF)/2,000 \ lb/ton$

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/y x N2O GWP (310).

^{**}Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Appendix A: Emissions Calculations **Natural Gas Combustion Only**

Heat Treat Furnaces

Company Name: Cast Metals Technologies Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr

1.26

HHVPotential Throughput MMCF/yr

mmBtu

mmscf

1020

10.8 2 heat treat furnaces @ 0.63 MMBtu/hr each.

		Pollutant								
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO			
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84			
					**see below					
Potential Emission in tons/yr	0.01	0.04	0.04	0.00	0.54	0.03	0.45			

^{*}PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

			HAPs - Or	ganics		
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total - Organics
Potential Emission in tons/yr	1.136E-05	6.493E-06	4.058E-04	9.739E-03	1.840E-05	1.018E-02

		HAPs - Metals								
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total - Metals				
Potential Emission in tons/yr	2.705E-06	5.952E-06	7.575E-06	2.056E-06	1.136E-05	2.965E-05				
	•	•	•	•	Total HAPs	1.021E-02				
Methodology is the same as above.					Worst HAP	9.739E-03				

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas						
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2				
Potential Emission in tons/yr	649	0.0	0.0				
Summed Potential Emissions in tons/yr		649					
CO2e Total in tons/yr		653					

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

^{**}Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Appendix A: Emission Calculations Insignificant Solvent Use

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

VOC Emissions

Туре	Density, lbs/gallon	Lbs VOC/gal	Actual Usage (gal/yr)	*Actual Usage (lbs/yr)	Annual Hrs of operation (hrs/yr)	Actual VOC emitted (tons/yr)	Potential VOC Emissions (tons/yr)	
Cold Cleaner	6.51	6.51	35	227.8	2000	0.11	0.50	Stoddard Solvent , 100% VOC
IF Slip Pattern Spray	7.587	6.83	35	240	2000	0.11	0.47	90% VOC, 87% toluene; 3% min
Y5-260 Liquid Parting	6.744	6.74	440	2,967	2000	1.48	6.50	Petroleum Distillate Boils at T > 5

, 87% toluene; 3% mineral spirits Distillate Boils at T > 500oF

Total:

7.47

Methodology

Actual VOC Emissions (tons/yr) = *Actual pounds/year / Annual Hours of Operation Potential VOC Emissions (tons/yr) = [Actual VOC emitted (tons/yr) * 8760 (hours/yr)] / Annual Hours of Operation

HAP Emissions

Туре	Density (Lb/Gal)	Actual Usage (gal/yr)	Weight % Toluene	Toluene Emissions (ton/yr)
Cold Cleaner	6.51	35	0.0%	0.00
IF Slip Pattern Spray	7.587	35	87.0%	0.12
Y5-260 Liquid Parting	6.744	440	0.0%	0.0000

Total HAPs = 0.12

Methodology

HAPS emission rate (tons/yr) = Density (lb/gal) * Actual Usage (gal/yr) * Weight % HAP * 1 ton/2000 lbs

^{*} Based on records for October 2007 to September 2008

Appendix A: Emissions Calculations Maintenance Welding

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

PROCESS	Max. electrode	EMISSION FACTORS**				EMISSIONS				
	consumption per	(lb pollutant/lb electrode)				(lbs/hr)				HAPS
WELDING	station (lbs/hr)*	PM = PM10	Mn	Ni	Cr	PM = PM10 = PM2.5	Mn	Ni	Cr	(lbs/hr)
Aluminum Rods	0.0475									
Nickel Rods	0.005									
Flux coated wire	0.001									
Mig Welding Wire Steel	0.066									
Total Welding Rod	0.1195	0.0055	0.0005	0	0.00001	6.57E-04	5.98E-05	0	1.20E-06	6.09E-05
						1	EMICCIO	NC		<u> </u>
							EMISSIO			
EMISSION TOTALS						PM = PM10 = PM2 5	(lbs/hi	r)	Cr	HAPS
EMISSION TOTALS						PM = PM10 = PM2.5			Cr	HAPS (lbs/hr)
EMISSION TOTALS Potential Emissions lbs/hr						PM = PM10 = PM2.5 0.0007	(lbs/hi	r)	Cr 1.20E-06	
							(lbs/hi	r) Ni		(lbs/hr)
							(lbs/hi	r) Ni		(lbs/hr)

METHODOLOGY

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,00

NOTES

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Maximum electrode consumption per day

	Maximum	Total
PROCESS	electrode	maximum
PROCESS	consumption	electrode
	per station	consumption
WELDING	(lbs/hr)	(lbs/day)
Total Welding Rod	0.1195	2.87

326 IAC 6-3-2(e) Allowable Rate of Emissions

Welding is exempt from this rule, provided that less than six hundred twenty-five (625) pounds of rod or wire is consumed per day.

Methodology

Combined maximum electrode consumption (lbs/hr) = Number of Stations * Maximum electrode consumption per station (lbs/hr) Combined maximum electrode consumption (lbs/day) = Combined maximum electrode consumption (lbs/hr) * 24 hrs/day

^{*}Actual material usage at 2000 hours of operation per year

^{**}Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

Emission Calculations Abrasive Blasting - Confined

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024 Reviewer: Sarah Street

Table 1 - Emission Factors for Abrasives*

	Emission Factor						
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM					
Sand	0.041	0.70					
Grit	0.010	0.70					
Steel Shot	0.004	0.86					
Other	0.010						

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

				Nozzle Pressure (p	osig)			
Internal diameter (in)	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1,050	1,160	1,265
5/8	820	990	1,170	1,336	1,510	1,680	1,850	2,030
3/4	1,140	1,420	1,670	1,915	2,160	2,400	2,630	2,880
1	2,030	2,460	2,900	3,340	3,780	4,200	4,640	5,060

Calculations	Adjusting Flow Rates for Different Abrasives and Nozzle Diameters										
	Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)										
	FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID	280									
	D = Density of abrasive (lb/ft3) From Table 2 =	L	99]							
	D1 = Density of sand (lb/ft3) =	-	99	-							
	ID = Actual nozzle internal diameter (in) =	L	0.25	-							
	ID1 = Nozzle internal diameter (in) from Table 3 =	L	0.25	1							
	Abrasive Flow Rate (FR) (lb/hr) = 280.000 pe										
	Uncontrolled Emissions (E, lb/hr)										
		PM	PM10*	PM2.5**	-						
	EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.041	0.029	0.029]						
	FR = Flow Rate (lb/hr) =	280.00	280.00	280.00	1						
	w = fraction of time of wet blasting =	0	0	0	%						
	N = number of nozzles =	1	1	1	j						
	Uncontrolled Emissions	= 11.48	8.04	8.04	lb/hr						
		50.28	35.20	35.20	ton/yr						
	Controlled Emissions***	= 0.574	0.402	0.402	lb/hr						
		2.51	1.76	1.76	ton/yr						
	Limited Emissions**** =	1.098	-	-	lb/hr						
		4.81	-	-	ton/yr						

NOTES

PM10 emissions derived from STAPPA/ALAPCO PM10 factors which were based on the amount of PM generated: sand = 0.7 lbs PM10 per lb of PM; grit= 0.7 lb PM10 per lb of PM; Steel shot = 0.86 lb PM10 per lb of PM. For "Other", assume PM10=PM.

**PM2.5 assumed to equal PM10.

***Based on 95% control for Bag Unit

METHODOLOGY

Ton/yr = lb/hr x 8760 hr/yr x ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x (lD/lD1) 2 x (D/D1)

E = EF x FR x (1-w/200) x N (w should be entered as a whole number [e.g., if w is 50%, enter 50])

326 IAC 6-3-2 Compliance Summary

		326 IAC 6-3-2 Allowable		Uncontrolled	Is a Control Device Needed	
Process	Maximum Process Weight (tons/hr)	Particulate Emission Rate (lbs/hr)	Maximum Allowable (ton/vr)	PTE of PM (lbs/hr)	to Comply with 326 IAC 6-3-2?	Required Control Efficiency
Flocess	weight (tons/iii)	(IDS/III)	Allowable (toll/yl)	(105/111)		Efficiency
Sand blasting	0.14	1.10	4.81	11.48	YES	90.43%

Allowable emissions under 326 IAC 6-3-2 are calculated using the equation where the process weight rate is up to sixty thousand (60,000) pounds per hour:

 $E = 4.10 P^{0.67}$ where E =rate of emission in pounds

E = rate of emission in pounds per hour and P = process weight rate in tons per hour

^{*}Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition).

^{****}Based on 326 IAC 6-3-2 (process weight rule) limit.

Appendix A: Emissions Calculations Uncontrolled Particulate Emissions from the Finishing Operations

Company Name: Cast Metals Technologies

Address City IN Zip: 1036 Old Highway 27, Winchester, Indiana 47394

Permit Number: M135-32888-00024
Reviewer: Sarah Street

Cut-Off Saw Uncontrolled Potential to Emit

Part weight (lbs)	Cross sectional area of two (2) cuts (in2)	Kerf width (in.)	Volume of material removed (in3)	Density of material (lbs/in3)	Weight of material removed (lbs)	Weight of Loss (%)	Weight of loss (lbs/ton)	Potential to Emit (lbs/hr)	PM Potential to Emit (tons/yr)	PM10 Potential to Emit (tons/yr)
27	2	0.03	0.06	0.098	0.00588	0.022%	0.44	0.31	3.71	0.37
5	1	0.03	0.03	0.098	0.00294	0.059%	1.18	0.85	3.71	0.37

Pedestal Sander Uncontrolled Potential to Emit

Part weight (lbs)	*Cross sectional area of parting line (in2)	Parting line length (in.)	Volume material removed (in3)	Density of material (lbs/in3)	Weight of material removed (lbs)	Weight of Loss (%)	Weight of loss (lbs/ton)	Potential to Emit (lbs/hr)	PM Potential to Emit, tons/year	PM10 Potential to Emit, tons/year
27	0.0004	40	0.016	0.098	0.001568	0.006%	0.12	0.08	0.49	0.05
5	0.0004	10	0.004	0.098	0.000392	0.008%	0.16	0.11	0.49	0.05

Methodology

Potential to emit based on rated capacity at 8,760 hours/year.

Volume of material removed (in3) = Cross sectional area (in2) * Size of cut or of material removed (in)

Weight of material removed (lbs) = Volume of material removed (in3) * Density of material removed (lbs/in3)

Weight of Loss (%) = (Weight of material removed (lbs) / Part weight (lbs)) * 100%

Weight of loss (lbs/ton) = (Weight of material removed (lbs) / Part weight (lbs)) * 2000 (lbs/ton)

PM Potential to Emit (lbs/hr) = (Weight of loss (lbs/ton) * Maximum throughput (lbs/hr)) * (1 ton/2000 lbs)

PM Potential to Emit (tons/yr) = Potential to Emit (lbs/hr) * 8760 (hrs/yr) * (1 ton / 2000lbs)

PM10 emissions are assumed to be 10% of PM emissions based on the PM10/PM ratio of the emissions factors for grey iron foundries finishing operations as found in AP-42, Ch. 12.10, Fifth edition 1995, Grey Iron Foundries, Cleaning, finishing (SCC 3-04-003-40) (i.e. 1.7/17).

Notes

Maximum throughput (lbs/hr) = Process weight rate = 1440 lbs/hr

The allowable emissions (i.e., process weight rate limit) (lbs/hr) are calculated on page 5 of 13, of this Appendix.

^{*} The cross sectional area of the parting line is based on a measured width of 0.02 in and height of 0.02 inches

^{**} Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Appendix A: Emission Calculations Fugitive Dust Emissions - Paved Roads

Company Name: Cast Metals Technologies Address City IN 21p: 1036 Old Highway 27, Winchester, Indiana 4739-Permit Number: M153-23888-00024 Reviewer: Sarah Street

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

	Maximum			Maximum					
	number of	Number of one-	Maximum trips	Weight	Total Weight	Maximum one-	Maximum one-	Maximum one-	Maximum one-
	vehicles per	way trips per	per day	Loaded	driven per day	way distance	way distance	way miles	way miles
Туре	day	day per vehicle	(trip/day)	(tons/trip)	(ton/day)	(feet/trip)	(mi/trip)	(miles/day)	(miles/yr)
Vehicle (entering plant) (one-way trip)	5.0	1.0	5.0	22.5	112.5	1056	0.200	1.0	365.0
Vehicle (leaving plant) (one-way trip)	5.0	1.0	5.0	22.5	112.5	1056	0.200	1.0	365.0
		Totals	10.0		225.0			2.0	730.0

Average Vehicle Weight Per Trip =

Average Miles Per Trip = tons/trip miles/trip

Unmitigated Emission Factor, Ef = $[k * (sL)^0.91 * (W)^1.02]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	22.5	22.5	22.5	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)] where p = $\frac{125}{365}$ days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2) days per year days per year

PM10 PM2.5 Unmitigated Emission Factor, Ef = Mitigated Emission Factor, Eext = Dust Control Efficiency = 2.082 0.1022 lb/mile 1.904 0.381 0.0935

(pursuant to control measures outlined in fugitive dust control plan)

	Unmitigate	ed Unmitigated	Unmitigated	Mitigated	Mitigated PTE	Mitigated PTE	Controlled	Controlled PTE	Controlled PTE
	PTE of PI	M PTE of PM10	PTE of PM2.5	PTE of PM	of PM10	of PM2.5	PTE of PM	of PM10	of PM2.5
Process	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Vehicle (entering plant) (one-way trip)	0.38	0.08	0.02	0.35	0.07	0.02	0.35	0.07	0.02
Vehicle (leaving plant) (one-way trip)	0.38	0.08	0.02	0.35	0.07	0.02	0.35	0.07	0.02
To	tale 0.76	0.15	0.04	0.70	0.14	0.03	0.70	0.14	0.03

Methodology Total Weight driven per day (ton/day) Maximum one-way distance (mi/trip) Maximum one-way miles (miles/day) Average Vehicle Weight Per Trip (ton/trip) Average Miles Per Trip (miles/trip)
Unmitigated PTE (tons/yr)
Mitigated PTE (tons/yr) Controlled PTE (tons/yr)

= [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]

- = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)] = [Maximum one-way distance (feet/trip) [5280 (trinlig)] = [Maximum trips per year (trip/day)] * [Maximum one-way distance (m/trip)] = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)] = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)] = [Maximum one-way miles (miles/day)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs) = [Mitigated PTE (tons/yr)] * [1 Dust Control Efficiency]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um) PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit





We Protect Hoosiers and Our Environment.

Michael R. Pence Governor

Thomas W. Easterly Commissioner

100 North Senate Avenue Indianapolis, Indiana 46204 (317) 232-8603 Toll Free (800) 451-6027 www.idem.IN.gov

April 11, 2013

Ryan Olney Cast Metals Technologies 1036 Old Highway 27 Winchester, IN 47394

Re: Public Notice

Cast Metals Technologies

Permit Level: 1st Significant Permit Revision-MSOP

Permit Number: 135-32888-00024

Dear Ryan Olney:

Enclosed is a copy of your draft First Significant Permit Revision-MSOP, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has submitted the draft permit package to the Winchester Community Public Library125 North East Street in Winchester, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper. The OAQ has requested that The News Gazette in Winchester, IN, publish this notice no later than Tuesday, April 16, 2013.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Sarah Street, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 2-8427 or dial (317) 233-8427.

Sincerely,

Pam K. Way Permits Branch Office of Air Quality

Enclosures

PN Applicant Cover letter. dot 3/27/08





INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



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ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

April 11, 2013

The News-Gazette Diane Jackson 224 West Franklin Street Winchester, IN 47394

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Cast Metals Technologies, Randolph County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than Tuesday, April 16, 2013.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Pam K. Way at 800-451-6027 and ask for extension 3-6878 or dial 317-233-6878.

Sincerely,

Pam K. Way Permit Branch Office of Air Quality

cc: Pat Cuzzort: OAQ Billing, Licensing and Training Section

Permit Level: First Significant Permit Revision

Permit Number: 135-32888-00024

Enclosure PN Newspaper.dot 3/27/08



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



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Thomas W. Easterly Commissioner

100 North Senate Avenue Indianapolis, Indiana 46204 (317) 232-8603 Toll Free (800) 451-6027 www.idem.IN.gov

April 11, 2013

To: Winchester Community Public Library

From: Matthew Stuckey, Branch Chief

> Permits Branch Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air

Permit

Applicant Name: Cast Metals Technologies

Permit Number: 135-32888-00024

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- **Draft Permit and Technical Support Document**

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. Please make this information readily available until you receive a copy of the final package.

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

> **Enclosures** PN Library.dot 03/27/08



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



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Michael R. Pence Governor

Thomas W. Easterly Commissioner

100 North Senate Avenue Indianapolis, Indiana 46204 (317) 232-8603 Toll Free (800) 451-6027 www.idem.IN.gov

Notice of Public Comment

April 11, 2013 Cast Metals Technologies 135-32888-00024

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

> Enclosure PN AAA Cover.dot 3/27/08



Mail Code 61-53

IDEM Staff	PWAY 4/11/201	3		
	Cast Metals Tech	nnologies 135-32888-00024 (draft)	AFFIX STAMP	
Name and		Indiana Department of Environmental	Type of Mail:	HERE IF
address of		Management		USED AS
Sender		Office of Air Quality – Permits Branch	CERTIFICATE OF	CERTIFICATE
	·	100 N. Senate	MAILING ONLY	OF MAILING
		Indianapolis, IN 46204	MAIENTO SITE!	

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1		Ryan Olney Cast Metals Technologies 1036 Hwy 27 N Winchester IN 47394 (Source CAATS)											
2		Randolph County Commissioners 100 South Main Street Winchester IN 47394 (Lo	cal Official)										
3		Winchester City Council and Mayors Office 113 E. Wahington Street Winchester IN	47394 (Loca	l Official)									
4		Winchester Public Library 125 N. East st Winchester IN 47394-1698 (Library)											
5		Randolph County Health Department 325 S. Oak St Winchester IN 47394 (Health D	epartment)										
6		Julie Delp Wilcox Environmental Engineering 5757 West 74th Street Indianapolis IN 46278 (Consultant)											
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			mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.